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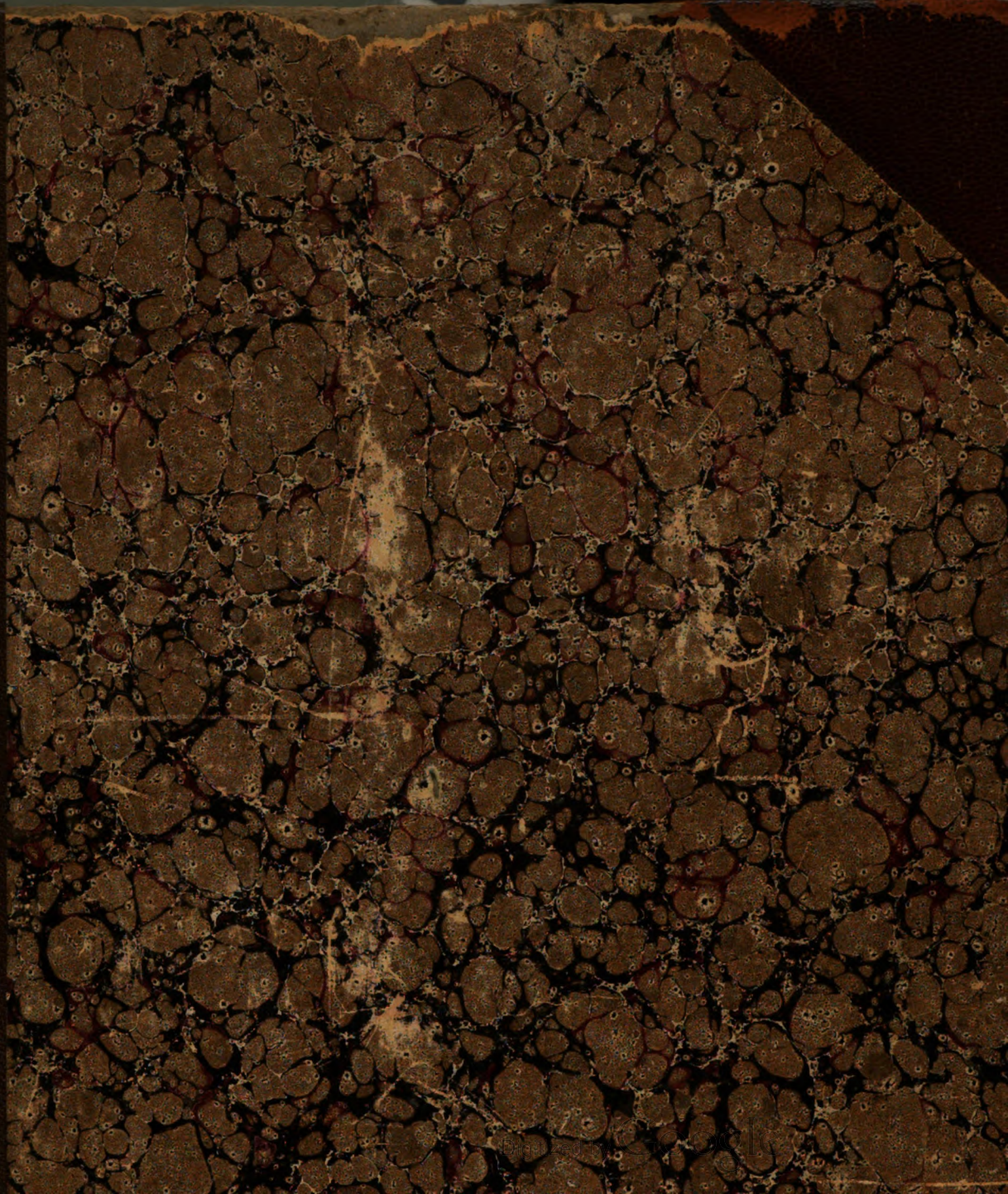




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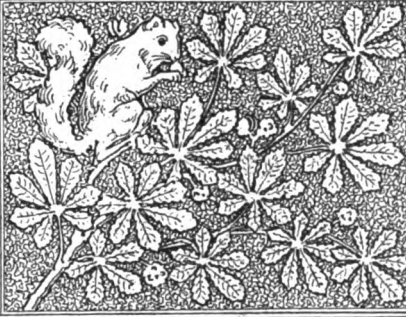
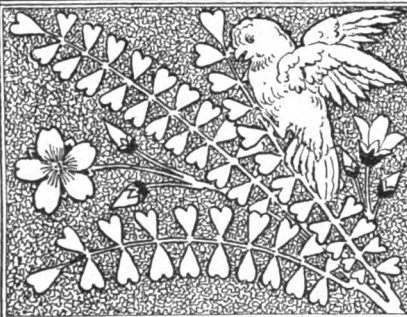








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JANUARY-MARCH



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gation Company's Offices. T. E. Col-  
lcutt, Architect, 1046 (*Int.*)
- Chancel, St. Peter's, Eaton Square.  
Sir A. W. Blomfield, Architect, 1052  
(*Int.*)
- Church of St. Columba. E. P. War-  
ren, Architect, 1049 (*Int.*)
- Entrance to Bishopsgate Institute.  
C. H. Townsend, Archt., 1048 (*Int.*)
- Fifteenth Century Lavabo in South  
Kensington Museum. Drawn by C.  
F. Bragdon, 1053 (*Reg.*)
- Interiors in House of Sir Frederic  
Leighton. George Aitchison, Ar-  
chitect, 1049, 1050, 1051 (*Int.*)
- New Record Offices. John Taylor,  
Architect, 1052 (*Int.*)
- Staircase, Mercer's Hall, 1047 (*Int.*)
- " Whitehall Court. Aroher  
& Green, Architects, 1045  
(*Int.*)
- Town-hall, Clerkenwell. C. Evans-  
Vaughan, Architect, 1053 (*Int.*)
- Longniddry, Scotland. Staircase Hall,  
Gosford House. William Young, Ar-  
chitect, 1053 (*Int.*)
- Manchester, Eng. Interior of Equitable  
Insurance Office. W. Waddington &  
Son, Architects, 1048 (*Int.*)
- Mayence, Germany. Drawn by John  
Comes, 1050 (*Reg.*)
- Millvale Borough, Pa. Public School  
Building. Bartberger & East, Archi-  
tects, 1047 (*Reg.*)
- Milwaukee, Wis. Johnston Emergency  
Hospital. Moller & Ehlers, Archi-  
tects, 1048 (*Imp.* and *Int.*)
- Minneapolis, Minn. Hennepin County  
Court-house. Long & Kees, Archts.,  
1047 (*Imp.* and *Int.*)
- Minneapolis, Minn. Wholesale Ware-  
house for Lindsay Bros. Harry W.  
Jones, Architect, 1048 (*Reg.*)
- Mont St. Amand-lez-Gand, Belgium.  
House. Modeste de Noyette, Archi-  
tect, 1045 (*Reg.*)
- Monte Carlo, Monaco. Casino and Ter-  
race. Charles Garnier, Architect, 1053  
(*Reg.*)
- Moret, France. La Porte du Pont, 1046  
(*Reg.*)
- Nancy, France. Sixteenth-century  
Wells in the Old Town, 1053 (*Int.*)
- Nantes, France. Museum. C. Joso,  
Architect, 1056 (*Int.*)
- Naples, Italy. Guglia della Concezione,  
1053 (*Int.*)
- New Bedford, Mass. Competitive De-  
signs for New Bedford Savings Bank  
Building:  
Andrews, Jaques and Rantoul, Ar-  
chitects, 1048 (*Imp.*)
- Charles Brigham, Architect, 1048  
(*Reg.*)
- Peabody & Stearns, Architects, 1048  
(*Imp.*)
- Newport, R. I. Details of the Old State-  
house. Drawn by P. G. Gulbranson,  
1055 (*Reg.*)
- Newton, Mass. Altar in Chapel of In-  
dustrial School. W. H. & J. A. McGinty,  
Architects, 1050  
(*Reg.*)
- " " Hills Library Building  
for Newton Theologi-  
cal Institution.  
Kendall & Stevens,  
Architects, 1052 (*Int.*)
- NEW YORK, N. Y.:—  
Appraiser's Warehouse. W. M. Aiken,  
Architect, 1054 (*Reg.*)
- Design for Houses on 86th St. George  
E. Wood, Architect, 1046 (*Reg.*)
- Details and Interiors in Metropolitan  
Club house. McKim, Mead &  
White, Architects, 1046, 1050, 1054  
(*Imp.* and *Int.*)
- Nice, France. Escalier Lesage, 1056  
(*Reg.*)
- Oporto, Portugal. Monument to J. H.  
Andresen. J. Marques Da Silva,  
Architect, 1047 (*Int.*)
- Orange, France. Roman Arch. Drawn  
by Thomas G. Holyoke, 1056 (*Reg.*)
- PARIS, FRANCE:—  
Colonnade of the Naumachia, Parc  
Monceau, 1051 (*Reg.*)
- Decoration of a Hôtel in the Rue  
Daru. M. Rich, Architect, 1047  
(*Int.*)
- Details of Etablissement Dufayel.  
Rives, Architect; Dalou and Fal-  
guière, Sculptors, 1056 (*Int.*)
- Medici Fountain. Luxembourg  
Gardens. Salomon De Brosse, Ar-  
chitect, 1051 (*Reg.*)
- Monument to Melissonier. A. Merclé,  
Architect, 1049 (*Int.*)
- Paterson, N. J. City-hall. Carrère &  
Hastings, Architects, 1051 (*Reg.*)
- PHILADELPHIA, PA.:—  
Forty-third St. M. E. Church. Jacoby  
& Weishampel, Architects, 1053  
(*Reg.*)
- St. Anthony Club-house. Wilson  
Eyre, Jr., Architect, 1056 (*Reg.*)
- Rheims, France. Christ, from the  
North Porch of the Cathedral, 1052  
(*Int.*)
- Ridgefield, Conn. Golf and Country  
Club-house. William A. Bates, Ar-  
chitect, 1045 (*Reg.*)
- Rockville, Conn. Mantels in House of  
A. N. Belding. S. J. Brown, Archi-  
tect, 1045 (*Reg.*)
- Rome, Italy. Sgraffito Decorations,  
1048, 1050, 1056 (*Reg.*)
- ST. LOUIS, MO.:—  
Building for Lindell Real Estate Co.  
Shepley, Rutan & Coolidge, Archi-  
tects, 1047 (*Reg.*)
- House of R. McK. Jones. Eames &  
Young, Architects, 1051 (*Imp.*)
- Museum of Fine-Arts. Peabody &  
Stearns, Architects, 1045 (*Imp.*)
- St. Paul, Minn. Competitive Design  
(Second Competition)  
for Minnesota State  
house. Cyrus F.  
Dean, Architect,  
1046 (*Reg.*)
- " " E. D. Chamberlin  
Building. Cass  
Gilbert, Architect,  
1056 (*Reg.*)
- Saintes, Belgium. Park Entrance  
Gates, Château de Mussain, 1052 (*Reg.*)
- Sandown, N. H. Door and Pulpit of  
Old Meeting-house. Drawn by J. A.  
Lane, 1055 (*Reg.*)
- San José, Cal. Sainte Claire Club-  
house. A. Page Brown, Architect,  
1049 (*Int.*)
- Somerville, Mass. Details of House.  
Drawn by F. C. Adams, 1046 (*Reg.*)
- Springfield, Mass. Business Premises  
for A. N. Mayo.  
Gardner, Pyne &  
Gardner, Archts.,  
1049 (*Reg.*)
- " " Phoenix Building.  
E. A. Ellsworth,  
Archt., 1049 (*Imp.*)
- Vaucresson, France. Villa of Henri  
Parent, Architect, 1055 (*Int.*)
- Verona, Italy. Study for the Restora-  
tion of the Porta Pallio. E. Pontre-  
moli, Architect, 1052 (*Int.*)
- Versailles, France. Farmhouse of the  
Petit Trianon,  
1052 (*Reg.*)
- " " La Maison du Sei-  
gneur at the Tri-  
anon, 1054 (*Reg.*)
- " " Porte Cochère, 1052  
(*Reg.*)
- Warm Springs, Va. Bath-house. C. H.  
Read, Jr., Architect, 1051 (*Reg.*)
- Washington, D. C. Army and Navy  
Club-house. Harvey L. Page & Co.,  
Architects, 1057 (*Reg.* *Imp.* and *Int.*)
- Wellesley, Mass. House of A. W. Pope.  
H. M. Stephenson, Archt., 1050 (*Reg.*)
- West Ham, Eng. Competitive Design  
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Library. Essex, Nicol & Goodman,  
Architects, 1047 (*Int.*)
- Weston, Mass. House of Francis A.  
Foster. James T. Kelley, Architect,  
1046 (*Reg.*)
- Wittenberg, Ger. Interior of the  
Schlosskirche, 1049 (*Int.*)
- Worcester, Mass. Central Exchange  
Building. W. G. Preston, Architect,  
1051 (*Reg.*)
- Wrentham, Mass. Proposed Fiske Me-  
morial Library. D. H. Woodbury,  
Architect, 1053 (*Reg.*)
- York, Pa. Passenger Station, Balti-  
more & Harrisburg R. R. J. A. Demp-  
wolf, Architect, 1052 (*Reg.*)



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## SUMMARY:—

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SOME time ago, we made some remarks on a communication to the *Engineering Record*, the author of which thought that cement concrete was best made with no more water than that which would adhere to the surface of the broken stones in the aggregate, after washing and draining. We thought that this was far too little water, and said so, giving an account of an actual case in which the amount of water used was accurately measured. Now, the *Engineering Record*, while not defending its correspondent's theories, criticises our opinion in a way which appears to us not quite fair. In the first place, it informs its readers that "the concrete approvingly cited by the *American Architect*" consisted of one part Portland cement, four parts sand, and seven of broken granite of the ordinary size, and says that this "is too poor for any first-class foundation work." Now, as a matter of fact, the concrete cited in our article, and expressly described in two places, was made with six, not seven, parts of broken granite; so that the "poverty" which the *Engineering Record* attributes to it may, we hope, be reduced by a considerable percentage. Farther on, the *Engineering Record* says that "the layers," which our article described as twelve inches thick, reduced to ten inches by the tamping, "are about double the proper thickness for effective ramming, which is always needed for good foundations." We do not dispute the *Engineering Record's* authority in such matters, but here, again, it seems to us that a grain of salt might appropriately season this statement. The concrete in question was put in, as is the case with concrete generally in architects' practice, in broad layers, the trenches varying from ten to fourteen feet in width; and, in this particular instance, the bottom on which it was laid was soft gravel, which had been filled in when the land was reclaimed from the sea, some fifteen years before. Obviously, to tamp a six-inch layer of concrete of this width, on such a bottom, would only result in disturbing, without compacting it; and, even if the first layer were successfully put in, the thin shell, only five inches thick, resting on a soft bottom, would certainly have been broken to pieces by the tamping squad, armed with their thirty-pound rammers, operating on another six-inch layer above it. The breaking of a slab of concrete is about the worst thing that can happen to it; and, while its tensile strength is, undoubtedly, increased by thorough com-

pacting, there is a point, in practice, where the extent to which compacting can be carried must be influenced by the danger of breaking what ought to be a continuous mass.

IT is partly for this reason, as we conceive, that it is found advantageous in practice to add water to concrete beyond the theoretical quantity. The *Engineering Record* says, in regard to the twelve gallons of water to each cask of cement which was used in the work to which we referred, that this was "probably twenty to twenty-five per cent more water than is needed for 'setting'"; but the surplus undoubtedly helped to compact the mass, and there is no reason, so far as we know, to believe that it injured the character of the subsequent crystallization. Every one knows the effect of water in compacting sand, or gravel. It is said that if dry sand is subject to a pressure of a ton to the square inch, and is compacted to the utmost density that such pressure can produce, it will still contract if sprinkled with water; and there is certainly reason, from analogy, as well as from the results of practical experience, to believe that a certain surplus of water greatly assists the tamping in compacting a layer of concrete of such thickness as must often be used in building operations. The *Engineering Record*, in speaking of the six-inch layers which it thinks most suitable for tamped concrete, says that "A half-hour's ramming," such as that described in our article, "would seriously injure much otherwise excellent concrete, for initial setting might begin in less time than that after deposition." It is hardly necessary to say that architects are generally quite aware of the difference between quick-setting and slow-setting cement, and would never think of using, in a tamped foundation like that described, anything but the slow-setting cements.

WE ought, perhaps, to apologize to our readers for bringing up this matter, but everything that concerns the proper making and using of concrete is of such vital interest to architects, that we wish simply to use it to invite the participation in the discussion of others, perhaps better qualified than we to impart information of real value.

THE New York *Press* has been alarming its readers with a description, attributed to an "architect," of what would happen if "a rivet" should give way in a high steel-frame building. According to this "architect," "if a rivet gave way at any place in the top story," the building "would then collapse utterly." It is strange at this time to find people who claim to be experts indulging in such talk. Nobody spreads such alarms about bridges; yet a steel-frame building is nothing else than a simple piece of bridgework, erected under favorable conditions for stability, and covered with a protecting casing. That the modern steel-frame structure is all that could be desired no one will pretend; but it is certainly a skilful adaptation, to new purposes, of materials and processes which have been many years in use, and it is ridiculous to speak of it, as it is the fashion to do, as a new creation, about the properties of which no one is in a position to form an opinion.

M. MAUREL, the celebrated baritone of the Opéra, has published in the Paris *Temps* some observations on the artistic capacity of the Americans, as he has been able to judge of it during his professional tour in this country. M. Maurel, who seems to be a man familiar with such matters, says, charitably, that in painting and sculpture the Americans have a great future before them; while in architecture he thinks that they have already arrived at a high state of artistic development. It is true that the twenty-story office-buildings do not please him much, but in the dwelling-houses of America, particularly in the villas in the suburbs of the great cities, he finds an originality, an artistic feeling, and delicacy of taste, which delight him greatly. While American architects, like those of every other country, must avail themselves of what has been done before, he finds that blind copying, such, for instance, as that which dots the country districts of France with "frightful Swiss chalets," is not common here, and that an artistic feeling controls the arrangement even of familiar details. It is a pleasure to think that, with all due allowance

for Mr. Maurel's personal taste, and, perhaps, his desire to be amiable to the Americans, his judgment of American architecture is well founded; and, as an encouragement to the people who produce that architecture, there can be no harm in quoting it.

**A** GERMAN architect lately got himself into trouble in a peculiar way. He had been commissioned by the Imperial Court to carry out an important building, for the execution of which a contribution of seventy-five thousand dollars or so was asked from the City of Berlin. The authorities of the city, who have all they can do to keep the streets clean, and provide for their paupers, could not feel themselves justified in making such a large donation out of the taxpayers' money; and declined to contribute. For some reason, the architect seems to have felt himself called upon to wreak vengeance on the City Councillors, and, just before the completion of the building, which, as it happens, was a church, erected in memory of the late Emperor, he had an inscription cut upon a bas-relief in a conspicuous place, informing the beholder that the town Councillors of Berlin were "camels," and that they were "too mean" to give any money to the building. Naturally, upon the opening of the church to the public, this inscription attracted great attention. It appeared that the architect had composed the inscription, and had stood by while it was being cut; and the police authorities, as an act of poetic justice, made him stand by a second time while it was being chiselled away. No further discipline appears to have been administered to the culprit; but the *Builder*, which is very properly indignant over this extraordinary abuse of authority, thinks that the Berlin Society of Architects ought to take the matter up.

**I**N our opinion that great *soi-disant* "journal of civilization," *Harper's Weekly*, has in its issue for last week committed a most uncivilized and unwarranted act in ascribing, by its illustrations, the full authorship of the Congressional Library Building, at Washington, to a young man who was appointed to the position of architectural director only after the building had been under construction three or four years, and the walls had reached the main cornice line. It is a most unfortunate editorial blunder, for the circulation of *Harper's Weekly* is so large that the elaborate illustrations of the building will probably fix permanently in the minds of the public the mistaken belief that Mr. Edward P. Casey is really the sole architect of the building. We believe that the misstatement that does so grave an injustice to Mr. Paul J. Pelz — to say nothing of the credit which is due for initiative work to his former partner, Mr. J. L. Smithmeyer — is due to mere editorial inadvertence, and was not caused by intentionally misleading statements on the part of any one. The text which accompanies the illustrations tells the real facts, though the writer's prejudice and bias in favor of the young men who are now carrying out the work of decorating the building cause him to give too slight credit to the real author of the building. Full credit can be given to General Casey, the executive official, to his son, the present architectural director, and to Mr. Green, the administrative official, for their thorough and excellent work without unfairly withholding from Mr. Pelz the credit that, we believe, unquestionably belongs to him, of having designed in most of its essential particulars the Congressional Library Building as it will stand hereafter.

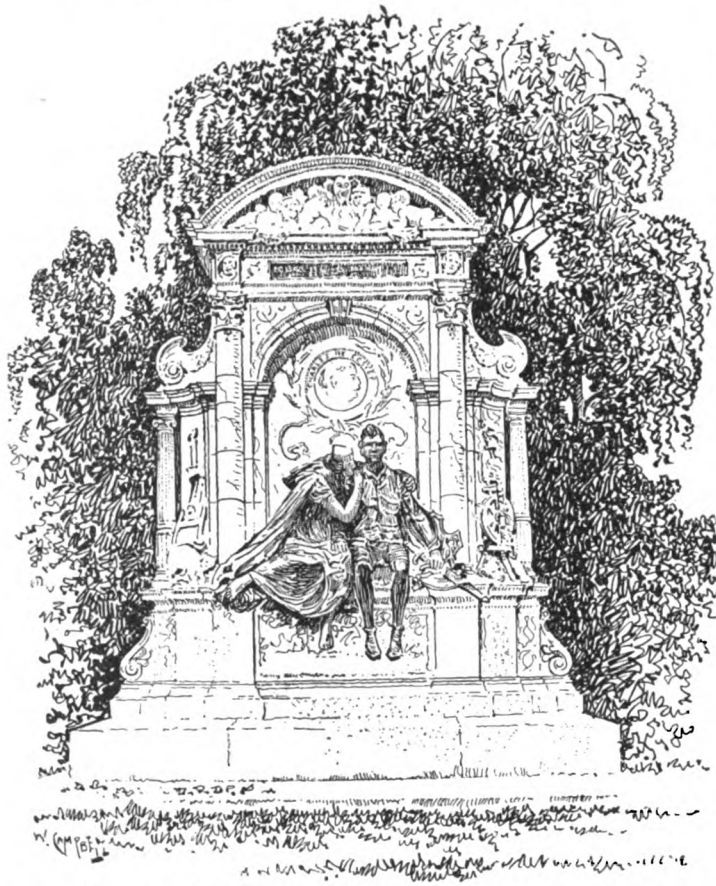
**A** PROPOSITION is under consideration in Philadelphia for removing all the buildings on Independence Square, except Independence Hall, so as to give the surroundings of the latter nearly the appearance that they had at the time of the Revolution; and steps have actually been taken to that end; but it appears that two other buildings on the Square have great historical interest; one of them having once been occupied by the Supreme Court of the United States, while the other served as the first Capitol of the Republic, Washington and Adams having both been inaugurated there, while Congress held for several years its meetings in the building. It is hardly necessary to say that the Philadelphians, on realizing these circumstances, have changed their minds about remodeling the Square; and, if anything is done, these two buildings, as well as Independence Hall, will be left intact. The remaining houses will, however, probably be removed; and a committee of the city Government is now in consultation with other citizens on the subject.

**A** SCHEME has been invented by some London malefactors, for the purpose of obtaining possession of other people's property, which is quite likely to be put in practice on this side of the water, so that our readers and their families should be on their guard. Not long ago, the Committee of the Cancer Hospital, at Fulham, decided to introduce incandescent electric lighting into their building, and made a contract for the wiring. The London electrical workmen take a half-holiday Saturday afternoons; and one Saturday, just after the workmen who had begun running the wires had gone for the day, a man appeared, who said that he had appointed to meet the foreman there at that time, and arrange where the switches should be placed. The porter of the hospital took him over the building, waiting for him while he took careful measurements of the rooms, and made marks on the walls, to show, as he said, where the switches were to be. At last he arrived among the nurses' bedrooms, in the upper story, and here, in addition to making measurements, and marking on the walls, he helped himself to three watches, some jewelry, and all the money that he could lay his hands on.

**L**E *Monde Moderne* gives an interesting account of the Carmelite convent in Paris, which is to be removed, to make way for a large school-building. Probably some students of architecture, at least, have penetrated into the beautiful garden of the convent, which, a few years ago, formed a quiet oasis in the midst of one of the busiest quarters of Paris; and the chapel is noted as the scene of the first Parisian massacres of the Revolution, when the populace, on the second of September, 1792, fell upon the unfortunate occupants of this peaceful abode, chased them, stabbing and beating them, through the garden walks, and finally penned them up in the chapel, where those that remained alive were murdered systematically. Already, owing to the extension of two streets across the site the chapel has disappeared, together with a large part of the garden; and the improvements now in contemplation will be made by the owners of the property, the Institut Catholique, which needs more facilities for its school work. The authorities of the Institut Catholique will preserve the great church of the convent, which is still standing, and some of the details of the buildings with which special associations are connected, but that is all that can be done. *Le Monde Moderne* recalls the circumstances of the massacre in an interesting way. On the 27th of August, the Assembly, in deadly fear of a reaction, issued orders that no vehicles should be allowed to circulate through the streets of Paris, that all persons should remain in their houses, and that every one found in a house not his own should be arrested. The next day, at six o'clock, a systematic visitation of houses commenced. It is hardly necessary to say that such an immense number of persons were arrested, that the prisons could not contain them all, and it was necessary to relieve the latter by transferring some of the prisoners to the convents. In the Carmelite convent were collected about one hundred and eighty people, including the brothers Rochefoucauld, Bishops of Beauvais and Saintes, the Vicar-General of Paris, and many others of the high clergy, only three laymen being included among the captives. On the 30th of August, the Procureur of the Commune visited the convent, and talked very amicably with the prisoners, to whom he spoke of arranging for their temporary exile; but, on the next day, he came back, to give a hint to the inn-keeper who supplied food to the illustrious prisoners to collect his accounts, as, in twenty-four hours, he would have nobody to collect from. The next day, the slaughter commenced, thirty armed men having been, for that purpose, secretly introduced into one of the buildings of the convent. A very few of the prisoners escaped; one was the Abbé Bérardier, who had been Robespierre's teacher at the school of Louis-le-Grand, and by his orders, was locked up in an out-of-the-way room.

**I**T is with sincere pleasure that we congratulate the editors and proprietors of *La Construction Moderne* upon the completion of the tenth year of publication, and the commencement of a new series. We have so often had occasion to refer with approbation to articles in this excellent journal that we need not repeat our praises, but will only wish to its readers many years' continuance of the brilliant comment on current events, the careful and learned technical articles, and the charming illustrations, which have characterized it from the beginning.

MURAL PAINTING BY THE AID OF SOLUBLE SILICATES AND METALLIC OXIDES, WITH EXAMPLES CHIEFLY FROM ST. MARTIN'S, WONERSH.<sup>1</sup>



Monument to Charles de Coster in the Bois de la Cambre, Brussels, Belgium. Charles Samuel, Sculptor, Fr. de Vestel, Architect.

THE use of soluble silicates was certainly known to the metallurgist, George Agricola, in the sixteenth century, and in the seventeenth Glauber,<sup>2</sup> the chemist, described the method of preparing what he called the "Tincture of Pebles or Flints," and, moreover, actually used soluble silicate as a "vehicle" by staining it ruby with gold. He justly observes, "that many great secrets are hid in the contemptible pebble or sand; which an ignorant and unexpert man (if they were disclosed to him) would hardly believe; for this present world is by the divels craft so far possessed with avarice that they seek for nothing but money, while honest and ingenious sciences are not regarded at all," . . . and, he adds, "if an honest godly chymist by the grace of God in his labours do hit upon the right steps and yet do doubt whether he be in the right way or no, then by reading of good and true philosophers' books he may at last learn out of them the firm and constant truth."

We need hardly say that we took Glauber's advice; the literature of our subject is voluminous, and we consulted all the "good and true philosophers' books" relating to it which we could obtain, but we regret that their conflicting advice sometimes left us in doubt as to whether we were taking the right steps, and we were thrown, in no small measure, upon our own experimental resources. The results are described in this joint paper, but the chemist would for the moment beg leave to say that it is the artist who has done all the work, as the chemist has merely watched the case in the interests of science, and in the hope of being able to promote the advance of decorative art in relation to the Church.

We would add that the late Bishop of the Diocese from time to time expressed the most kindly solicitude in the work at St. Martin's, and his appreciation of the results, and we deplore the fact that Dr. Thorold did not live to see the completion of the decoration of the little building in which he took so much interest.

We have naturally turned to the Society of Arts, which has always shown generous interest in efforts to improve the decoration of our buildings, and we therefore ask its members to give their sympathetic attention to the efforts we have recently made to revive in this country a method of mural painting which has, we think, been unduly neglected.

It is not necessary that we should attempt to give the history of mural painting, our object being to describe the method adopted by one of us in the decoration of a little church in Surrey, and to give our reasons for the hope that the results will prove as enduring as they are effective. It is, however, necessary to indicate briefly the

nature of the more important methods of mural decoration which have from time to time been adopted.

An examination of the walls of old churches in this country shows that colored ornament was widely used in internal decoration. Cases in which true fresco was employed must have been but few, though other methods were frequently adopted. It is recorded,<sup>3</sup> for instance, that, in the reign of Henry III, both English and foreign painters decorated the walls of the Royal Palace of Westminster. The foreign artists, Peter of Spain and William of Florence, received sixpence a day for their work, while William the monk, in the adjoining Benedictine Abbey of Westminster, had the higher remuneration of two shillings a day. Their work, however, was probably painted on the walls with colors mixed with oil, oil-varnish being also used. With decorations of this kind we have nothing to do in the present paper. We only offer an incidental reference to the truly venerable decorative methods of ancient Egypt by which walls were colored by metallic oxides, as leading to the consideration of the methods in which the surface of the wall is imbued with color, which, in fact, becomes a part of the mural surfaces. These methods are as follows:—

1. The method of painting on freshly floated mortar with raw pigments, either mixed with pure water or slaked lime, the ground being both wet and caustic. The painting progresses like the fragmentary fitting of a child's puzzle, the edges left by one day's work being covered by the next. This process is called *Buon' Fresco*.

2. The method known as *Fresco-secco*, in which colors are used on a fresh but dry *intonaco*, or ground, but in *Buon' fresco* and in *Fresco-secco* the vehicle is lime water, and the binding is effected by the formation of carbonate of lime.

3. The method of painting with a medium of which wax forms a considerable part. The wax mixed with color, may either be distributed by means of a heated spatula over the design drawn upon the walls, or a brush dipped in color may be employed. As we shall not have to refer to this wax method again we may add, as showing that the chemistry of the method received some attention, that the artist is directed not to employ an iron spatula, and Van Dyck is said to have used one of horn. The modifications of the wax method are numerous, and some of them involve the use of gums, varnishes and turpentine, the vehicle being solutions of resin, wax and paraffin.

It is unnecessary to say that the President of the Royal Academy advocates the use of a particular modification of the wax method, known as "spirit fresco" and that Sir Frederic Leighton used it with admirable effect in his well-known picture at Lyndhurst<sup>4</sup> and those in the Gallery of the South Kensington Museum. With regard to this process Sir F. Leighton observed in 1864 that "the only point in which it is inferior to real fresco is in the absence of that pure crystalline quality of light so peculiar to the latter." The South Kensington pictures are, we venture to think, deficient in this luminous quality, and in this respect the new pictures at St. Martin's, Womersley, leave little to be desired. Mr. F. Madox Brown has also used this Gambier Parry "spirit fresco" process in his seven beautiful mural paintings in the Manchester Town-hall, and, as he says, has "had no reason to complain of their behavior." The process, is, however, so far as we know, absolutely unsuitable for external decoration.

The Society of Arts viewed this wax process with favor more than a hundred years ago, as it awarded, in 1786, a gold palette to Miss E. J. Greenland<sup>5</sup> for her attempts to revive the use of wax in mural decoration, while in 1792 she was thanked<sup>6</sup> for a further communication "on a method of making a composition for painting in imitation of the ancient Grecian manner."

As regards the methods of *Buon' fresco*, so widely practised in early Italian art, from the year 1390, when Pietro d'Orvieto used it at Pisa, we would only observe that it was hardly ever employed alone, as the works were finished with external touches of unprotected *tempera*, which, of course, rapidly faded under atmospheric influences. We owe to Vasari and to Cennino Cennini (1437) clear statements as to the methods followed by the Byzantine artists, and subsequently by the Italians. Cennini says that their works were always finished in distemper. Angelino used solid distemper of excellent quality, which proved to be very enduring. Ghirlandajo employed distemper widely, Perugino painted in pure fresco, and retouched with distemper. We have dwelt on these facts because the retouching with *tempera*, which is certain to fade, was to some extent rendered necessary by the puzzle-like nature of the work in true fresco, as even the most skilful artist must have left some joins in the frescos which needed covering with color. In the use of the method, the merits of which we are about to urge, no retouching is necessary.

It may be useful if we add that M. Marzocchi di Bellucci has, after laborious investigation, recovered many of the old receipts and prescriptions adopted by the early fresco painters, and has recently received a gold medal for his fresco-work from the *Société d'Encouragement* of Paris.<sup>7</sup>

#### THE SOLUBLE SILICATE PROCESS.

The history of this process, so far as England is concerned, may be said to have begun with the efforts to revive the use of true

<sup>3</sup> "Vetusta Monumenta."

<sup>4</sup> *Journal of the Society of Arts*, Vol. xii, 1854, p. 203.

<sup>5</sup> "Transactions," Vol. v., p. 107.

<sup>6</sup> *Ibid.*, Vol. x., p. 168.

<sup>7</sup> *Bull. de la Soc. d'Enc.*, Vol. x, 1895, p. 821.

<sup>1</sup> A paper by Mrs. Lea Merritt and Professor Roberts-Austen, C. B., read before the Society of Arts and printed in the *Journal* of the Society.

<sup>2</sup> The works of John Rudolph Glauber, translated by Christopher Packe, 1689, pp. 45-47.



fresco in the decoration of the Houses of Parliament at Westminster! Its use in that building is well described in the Reports and letters written by Daniel Maclise, R. A.,<sup>1</sup> between the years 1859 and 1861, and the *Journal* of this Society shows how anxiously the subject was considered within these walls. We believe, however, that in the interval between the work of Maclise and that done by one of us at St. Martin's, Womersley — that is, more than thirty years — no decorative work has been executed by the water-glass process in this country, and this fact constitutes the main justification of our paper. The process is referred to at some length in a paper on fresco-painting communicated to the Society in 1864<sup>2</sup> by Mr. Beavington Atkinson, the chair being taken on that occasion by Lord Elcho (now the Earl of Wemyss) who observed that "while they admitted that *fresco puro* was imperfect in itself, let them not on that account give up mural decoration altogether — till they were assured that no good substitute had been discovered." It was on this memorable evening, the 10th of February, 1864, during the discussion of Mr. Beavington Atkinson's paper, that the merits of the process we have adopted and the difficulties which attended the efforts to work in true fresco at the Palace of Westminster were brought into strong light. Lord Elcho referred to "a most interesting conversation" he had had with Mr. Herbert on this subject, and the following is the graphic record of this conversation as given in the pages of our *Journal*. Mr. Herbert told Lord Elcho that "he had nearly been driven mad by the trouble and annoyance which the old system of fresco had caused him. He added that he never knew how the work would turn out, the colors being put on while the plaster was wet, in which state it remained for about eight hours, and having finished a piece one day, he had to wait till the next to see whether it was correct." The results also differed from day to day. "Thus, with respect to the small fresco of King Lear and Cordelia, Mr. Herbert had cut out the head of Lear six times and that of Cordelia five times, and there was no part of that picture which had not been cut out four times," so that evidently much depended on the plasterer. We would here observe that we are satisfied from our own experience that this must have been the case, and we may add that at St. Martin's we maintained throughout the work the most cordial relations with the artist whom we entrusted with the manual portion of the work. We should not have considered it necessary to say this, had not the page of the *Journal* of the Society from which we are quoting recorded the "melancholy fact that Mr. Dyce's and Mr. Herbert's plasterers had each died mad — one raving mad and the other melancholy mad," Mr. Herbert attributing this regrettable incident in a great measure "to the constant worry" to which these unfortunate men were subjected in their department of the process.

In view of these statements, it is not remarkable that the soluble silicate, or water-glass process, the rival of true fresco, found strong advocates, for, as Lord Elcho said, "they had high testimonials in its favor, as it appeared to have stood the test of a good many years. The examples, for instance, of this process at Munich had stood while the (true) frescos had failed." Reference will subsequently be made to the present state of the pictures by Maclise at the Palace of Westminster.

After a lapse of twenty years the water-glass process, or stereochromy, was again brought to the notice of this Society on the 15th of February, 1884, when the Rev. J. A. Rivington read a paper on the modification of the process, which bears the name of Herr Adolph Keim.

It is to Mr. Rivington's efforts to introduce the process into this country, and to his personal kindness, that one of us was, in the first instance, indebted for information respecting it, and for our knowledge of its details, which we will now proceed to describe. We should, however, state that although, so far as we can ascertain, no decorative work had been executed in this country for thirty years, that is, until we worked at St. Martin's, nevertheless, many experiments in the process have from time to time been made by Professor Church, F. R. S., the distinguished Professor of Chemistry at the Royal Academy. His first investigations on this subject were made in the years 1853-54, and were noticed by the Rev. John Barlow in a Friday evening discourse at the Royal Institution. Professor Church's latest contributions to stereochromy are embodied in his treatise on "*The Chemistry of Paints and Paintings*,"<sup>4</sup> and in a Parliamentary paper to which we shall again refer.

The process of mural painting known as stereochromy was invented about the year 1825 by von Fuchs, and first practised in Germany by a group of artists, of whom Kaulbach is the best known, and in this country by Daniel Maclise, R. A. That the early paintings were less permanent than the inventor hoped they would be, is largely owing to the imperfections in the preparation of the walls and to the too hasty application of the final fixing fluids. These points have been so completely demonstrated that it is safe to conclude that, where the preparation of the wall is thoroughly and conscientiously carried out, pictures can now be painted on the walls of our buildings which will not only resist atmospheric conditions of a trying kind, but may be cleansed by free use of pure water, that is, filtered rain-water or distilled water.

#### MANIPULATION INVOLVED IN THE PROCESS.

There is nothing about the process which is beyond the skill of any good plasterer, but it is necessary to follow faithfully the directions issued by the Munich manufacturer of Keim's materials.

The method of painting is simple and the artist may pursue it at leisure, and may retouch the work where desirable until the whole effect is satisfactory. The final fixing of the colors also indurates the wall and vitrifies the painting, so as to make it hard and capable of resisting wet and atmospheric conditions which are ruinous to fresco and tempera. The surface is without lustre, it may be either rough or smooth as the artist wishes, and the colors are both clear and bright. A very full palette is available which comprises forty-five pigments chiefly composed of the mineral oxides with which artists are familiar. Vermilion, cadmium, chrome-yellows and madders are not used, but are replaced by red-lead, chrome-red and uranium-yellows. Zinc-white and baryta-white replace white-lead. The important stages of the process are the preparation of the wall and the final fixing of the pictures, which also completes the hardening of the mortar. In preparing a wall for painting, the first care should be to make it absolutely dry. Damp-bricks or over burnt bricks, or decaying wood must be cut out and replaced with sound material. Upon the stone or brick wall the first coating of mortar, commonly called "rough-cast," must be laid.

For this mortar, lime must be selected which has been slaked a very long time, and the purest that can be obtained. It should have lain some years in a pit thoroughly slaked. In the preparation of the mortar and throughout the entire work, only distilled water or filtered rain-water can be used.

The mortar for the rough-cast consists of four parts of washed and dried sand, to which one-eighth part of Keim's rough-cast extract is added, and one part only of lime. The lime must first be well stirred in twice its bulk of water and passed through a fine sieve; then mixed with the sand. Water may be then added to produce the proper consistency.

The wall is to be carefully dusted and made very wet. When it has sucked in the water, a very thin mortar is "thrown" from the trowel, and before this is quite dried, the mortar is again cast upon it in sufficient bulk to make the surface absolutely even. Great care must be taken that the rough-cast is perfectly even, because if this is not the case, the painting ground subsequently laid upon it cannot be made of equal thickness. This mortar must not be allowed to dry too suddenly, as cracks would be caused. In very dry, hot weather, it should occasionally be sprinkled with water. If cracks appear, they must be carefully filled. The time that this mortar takes to dry varies according to climate or weather. Under the most favorable circumstances, it would require nearly a year. When dry, the painting ground is laid upon it.

The painting ground consists of eight measures of dry-painting ground to one measure of lime. Thin and sift the lime as before, and mix it with the powdered material in distilled water. The rough-cast must be made thoroughly wet with distilled water, and the painting ground is then laid upon it. This should not exceed one-eighth of an inch in thickness. It requires some skill to lay it, as the quantity of lime is so very small. The plasterer must only undertake so much as he can finish rapidly before it sets, for if he rubs it after it is dry, the surface will be rotten. When this layer has dried for several days, a crust of carbonate of lime will be formed upon the surface, and would prevent the water-glass from being absorbed in the body of the mortar. To destroy this calcareous incrustation, an acid is used. The acid supplied by the Munich firm is diluted by three measures of distilled water. We find that the acid supplied to us for use is hydrofluosilicic acid. This is brushed upon the walls twice in succession by a slow, regular movement from a large hog's-hair brush. The wall is then allowed to dry for twenty-four hours. After the acid is dry the wall may be washed twice with distilled water. The hardening fluid as supplied by the Munich manufacturers is then applied, being first diluted with two measures of distilled water. A varnish brush about three inches wide is used for the purpose, and is lightly and evenly drawn over the surface. Drops must not be allowed to run down, and there must be no retouching. The wall is allowed to dry for twenty-four hours, and the application then repeated exactly as before.

In the case of ceilings where it is difficult to lift the liquid with a brush, or on walls where the painting ground has from some cause been of unequal thickness (which makes it difficult for the hardening fluid to penetrate equally and so bind it to the wall), it is best to dilute the hardening fluid with four measures of distilled water and to brush over the surface twice in succession, and after it has dried, to repeat the operation in the same way.

Ceilings may more easily be treated by means of spray, but for the acid solution a glass spraying-can must be used. The appliance supplied for fixing may be used for this purpose, the spray being produced by the aid of ordinary bellows.

The ground thus laid is pure white. When struck or scratched it should ring like stone, if rubbed with the finger no little grains should be detached, and water thrown on it should be quickly and evenly absorbed. If the painting ground satisfies all these tests it is ready for the artist, and may be either immediately painted on or it will remain equally fit to receive color after an interval of years.

Should the presence of any hollow spots in the painting ground be detected by sounding, these must be cut out with a sharp knife down

<sup>1</sup> See the excellent work on mural decoration by Mr. W. Cave-Thomas, London, Windsor and Newton, and also the Twelfth Report of the Commissioners on the Fine Arts.

<sup>2</sup> *Journal of the Society of Arts*, Vol. xii, 1864, pp. 194 and 225.

<sup>3</sup> *Loc. cit.*, p. 202.

<sup>4</sup> Seeley & Co., 1890, pp. 19, 73 and 244.



to the rough-cast and replaced, every detail of the successive treatment of the original ground being repeated. The cause of such spots in which there is no union between the painting ground and the rough-cast may either be due to insufficient wetting of the rough-cast, to careless work in plastering, or to insufficient treatment with the acid and subsequently with the hardening fluid. The rough-cast had not, in fact, been penetrated by these fluids.

The colors are found to "work" very freely. They are supplied finely ground in distilled water and are mixed on a tin palette (an aluminium one would be much lighter), with little wells arranged to hold the moist color.

The wall must be kept wet, while painting, for which purpose the spraying machine used for fixing is available. The pigments, of course, look darker in the wet state than they look when dry, but as the picture may be easily moistened there is no difficulty in harmonizing various parts, and a knowledge of the depth of color to be expected when the work is dry is soon acquired. The use of thin transparent washes upon the white ground or over other colors adds a great charm to the effect. Body colors may also be used. It is, to a certain extent, possible to wash off unsuccessful portions of the color; but, as in fresco, the best work is that which is carefully traced from finished studies and painted quickly without alteration. Generally speaking, it may be said that the depth of color attainable is about equal to pastel, although there is a clear transparent quality about the work which differs greatly from pastel.

When the whole picture is finished and has been allowed one or two days to dry, the fixing should be done as follows, but if the atmosphere is not exceptionally warm and dry, have the place warmed by fires. The fixing fluid supplied from Munich is diluted for the first and second applications with two measures of distilled water, and for subsequent applications with three measures of water. It is very advantageous to warm it after dilution, by standing it, in covered vessels, in pails of boiling water, as when hot it sets more quickly, but if warmed in other vessels evaporation would cause loss of some of its ingredients.

It is first applied in the form of spray by means of a small appliance specially devised for the purpose, and connected with bellows. Care must be taken to spray the work evenly, and any drops running down should be instantly dried with clean blotting-paper. After drying for twenty-four hours the fixing fluid is applied again, the degree of dilution being the same, but the spraying appliance may be more closely approached to the work, and a more copious douche given without fear of disturbing the colors. After again drying, the fixing solution is again applied as spray, but diluted with three measures of distilled water.

After this the colors will be found to be so far fixed that for further treatment it is best to use a broad paint-brush. For the lighter colors, four applications of the fixing solution will generally be found enough, but some colors, notably the darker tints, may require twice as many. The test of perfect fixing is afforded by rubbing the work with a white cloth, or with white paper. Strong white paper or visiting-cards may be dragged across the color to be tested with as much pressure as the hand can exert. If the card shows the least stain of color, the portion whence it came should be brushed over with the fluid again. No color should receive more solution than it requires, for "over fixing" would produce a gray, shiny spot. This part of the process is tedious, as time must be allowed for the drying between each application of fluid. In Munich it is always done by an experienced workman. It is well, after the first fixing, to dwell more upon the darker colors, going over those parts a second time with the spray while they are still moist, provided that no moisture lies on the surface, and is thoroughly absorbed.

A few weeks after the fixing, it is desirable to wash the pictures with a copious spray of distilled water to cleanse them from a slight efflorescence that may have appeared.

Von Fuchs recommended that the underground should be treated with two applications of water-glass, diluted with twice its bulk of water. Upon this the painting ground is laid one-tenth of an inch in thickness, and is composed of ground marble, or dolomite, with *not too much* lime. The proportion of lime is not fixed, but in MacLise's journal stated to be as one-third. The subsequent treatment of this ground, first with phosphoric acid diluted with six times its bulk of water, in order to convert the crust of carbonate of lime into phosphate of lime, and afterwards two applications, with interval allowed for drying, of fixing water-glass diluted with equal bulk of water. The painting is then executed in water-colors. The fixing is effected by spraying with water-glass diluted with only half its bulk of water, the operation being repeated with intervals for drying until the result is attained.

Reference to the original treatise by von Fuchs shows that the improvements effected by Herr Keim consist, first, in restoring the original scheme of the inventor in the preparation of the wall; second, in fixing the proportion of the lime used in the painting ground at one-eighth instead of one-third of the bulk of powder; third, in directing that the fixing should be done more gradually by more diluted silicate. The fixing fluid, as provided by his manufacturers, is to be diluted with twice its bulk of water, and, after the second application, with three times its bulk, instead of only one-fourth, as prescribed by von Fuchs.

Von Fuchs found that silica combined more readily with two bases than with one, and, consequently, water-glass became insoluble with increased rapidity, when mixed with earths or mineral oxides,

forming double and treble silicates. Water-glass exhibits much greater power of adhering to powdered marble and dolomite than to quartz, although a little lime with quartz improved its cementing powers. With gypsum its effect was not satisfactory.

As has been already stated, one of the authors of this paper was instructed in the details and manipulation of this method by the Rev. J. A. Rivington, who most kindly obtained the necessary materials from Munich, and explained their use. Fortunately, he has now arranged for the supply of the materials in London, and has trained a practical man in the preparation of the wall, and in the operation of fixing. The walls of the little church of St. Martin's, Womersley, which one of us had the pleasure of decorating, were successfully prepared by a skilful local plasterer, employed by its builders, Messrs. Brown Bros., of Bramley, Surrey; there were, however, slight irregularities, which more experience would have rendered it possible to avoid. The process of fixing was, therefore, unduly prolonged. We were anxious to show that, with the exercise of due care, satisfactory results could be obtained by inexperienced plasterers; but the services of a trained workman, who is perfectly competent to fix pictures, can also be secured by the application to the Rev. J. A. Rivington, of Baldon Woodstock.

The cost of the materials, the acid, hardening fluid, and fixing fluid, as sold by the Munich firm, is estimated at about 3s. 4d. per square metre of surface. The cost of colors is about what artists' pigments of the best quality always are in this country.

#### THE CHEMISTRY OF THE PROCESS.

First, as regards the ground, the simultaneous presence of quartz and marble-dust in this painting ground is found to be useful, and we ascertained that the material we employed gave on analysis the following results:—

Free Silica (quartz sand).....	52.28
Lime.....	26.96
Carbonic Anhydride.....	20.72
	99.96

which corresponds to about equal parts of quartz sand and marble dust. This ground is mixed with eight measures of lime and laid on the wall as has already been indicated. The ground when dry is treated in the manner already described, with a dilute solution of hydrofluosilicic acid. Analysis proved that the undiluted solution contained 2.34 per cent of acid ( $H_2SiF_6$ ). The object of treatment with this acid is to destroy the superficial layer of carbonate of lime and to form silicofluoride of calcium, which is, however, not insoluble. The use of the solution of hydrofluosilicic acid constitutes, in our opinion, one of the chief improvements of the process, for at the time MacLise worked, dilute phosphoric acid was recommended for the preliminary treatment of the painting ground, the object being to form phosphate of lime. The use of hydrofluosilicic acid gives rise to very complicated reactions, the nature of which we are still investigating. It is probable that some hydrofluosilicic acid may remain on the painting ground until the first treatment with the potassium silicate, and, if this is the case, the effect would be to form fluosilicate of potassium, which is comparatively insoluble and so acts as a cementing agent. It seems clear that gelatinous silica is also precipitated.

Treatment with the solution of soluble silicate then follows, and we find that the undiluted solution contains:—

Silica.....	22.03
Potash ( $K_2O$ ).....	8.19
Water.....	68.92
	99.14

which corresponds roughly to the formula  $K_2O, 4SiO_2$ . We should state that these analyses have been made under the direction of one of us, by Mr. William Groves, in the Royal Mint Laboratory.

Painting with the pigments then ensues. It is stated by Prof. Church that the pigments should be treated, as recommended by Kuhlmann, with some of the fixing fluid and then re-ground; and in some cases they require the addition of oxide of zinc, powdered marble, powdered glass, carbonate of baryta, soluble silica, and hydrate of alumina, "in order that their natural inaptitude for equal fixation by the alkaline silicate should be remedied." When the picture is completed, the fixing solution is applied, and we find the application of the fixing solution completes the cementing together of the particles of the ground, and of the various pigments by forming an alkaline carbonate and double silicates. Analysis proved that the undiluted solution we used contained 16.50 per cent of silica.

The main constituents of these silicates must be calcium and potassium, the other bases will of course vary with the pigment employed, and as these are mainly metallic oxides, either natural or artificial, the silicates formed will, therefore, correspond to certain minerals which are met with in nature. It appears from the examination of some sections that the mere cementing action of the silicate of potash is considerable, apart from any important chemical change, and we are satisfied that sufficient attention has hardly been devoted to the fact that the external colored layer which contains the pigment is very thin compared with the rest of the section of the ground, and that it is very difficult to determine by chemical analysis

alone, what changes have really taken place. It is certain that the glazing action which results from the treatment with the soluble silicate is very considerable, and it must be remembered that the color of the pigments are not materially changed by their union with the silica. In many cases we have examined it seems as if the silicates which are formed, whatever their composition may ultimately prove to be, is only colored by the oxides used as pigments, just as the colored bands of agate often owe their tints to the presence of enclosed metallic oxides.

It will be evident, therefore, that the study of the chemical reactions must be supplemented by petrographical examination. Portions of the finished fresco must be treated as if they were natural rocks by cutting them into sections, for submission of micrographic investigation in the usual way. By the kindness of Professor Judd, C. B., Dean of the Royal College of Science, we have had such sections prepared, and one section colored, as seen by reflected light, brilliant yellow and red, will be thrown on the screen.

A careful examination of the section reveals the fact that the pigments are unaltered. The quartz grains are apparently not attacked, but the carbonate of lime has been acted upon, and an isotropic substance, probably silica, has infiltrated into the cracks, the cleavage, and the twinning planes of the marble grains. There are little masses of a substance, probably silica, acting as a cement. The surface from which this section was cut had been prepared about three years, and it will be interesting to see whether in the course of time silicates slowly form. There appears to be some of the marble dust remaining in it after the hydrofluosilicic has done its work. It will be evident that if failure in stereochromy should occur, the cause of failure can be more surely traced by micrographic examination than by any other known method.

As regards the work at St. Martin's, we would only observe that some of it has now been completed for nearly three years, and that no trace of deterioration is evident. No efflorescent bloom—which is, we think, mainly caused by the use of silicate of soda instead of silicate of potash for the ground, and to the undue use of the fixing solution—has appeared over the surface of the pictures, nor have the colors, so far as we can detect, faded in the least degree. One of the pictures was by accident subjected to a severe test, as a defect in the roof freely admitted rain-water from behind, and one of the heads, a figure-subject, was thoroughly drenched with water, a test it stood perfectly.

#### THE RESULTS OF THE EARLIER EFFORTS IN STEREOCHROMIC PAINTING.

As has been already stated, the method was employed in the decoration of the Royal Palace of Westminster. In a report dated December, 1859,<sup>1</sup> Daniel Maclise states that he did not consider it necessary to treat the painting ground with the soluble silicate before beginning to paint. He therefore omitted to do so, acting on advice which had been tendered to him by eminent German authorities, but we consider that this omission was most unfortunate. He also seems to doubt whether organic colors, such as lakes and madders, were really unsuitable, and he said that "water-glass does not affect them to any appreciable extent." We have no reason, however, to suppose that he really used organic colors. F. Madox Brown<sup>2</sup> has recently referred as follows to "the water-glass process in which Daniel Maclise's great paintings have been executed": "I see no precise reason," he adds, "why these noble works should not last and defy climate for many long years yet, though from want of experience he very much endangered their durability through the too lavish application of the medium." We think that as regards the preparation of the ground, he was not lavish enough. The actual state of the pictures in the Palace of Westminster is often cited as telling heavily against the use of the process we are advocating. It is fortunate, therefore, that during the present year an authoritative report on their condition has been made by Prof. Church. This interesting Parliamentary document<sup>3</sup> begins with the reassuring statement that "the two water-glass (or stereochrome) pictures in the Royal Gallery are in a generally sound condition"; this is, however, qualified by the observation that they are "obscured by a white efflorescence." Mr. Herbert's "Moses," painted in water-glass, is also "obscured in a few places by a white efflorescence," but flecking the picture with soft linen, followed by treatment with soft bread, "restores the obscured parts to their pristine beauty." With regard to the pictures by Maclise, Prof. Church found that they are covered with a gray film, which, on analysis, proved to contain the sulphates of calcium, potassium and sodium, with traces of ammonia compounds, but it is in the highest degree satisfactory to learn that "the colors underneath the above-named film were firmly attached to the plaster." In the case of the "Nelson," finished in 1865, a "deep-blue pigment and a deep-red pigment were found to be rather loosely attached." We were aware that certain colors required more careful fixing than others, and in the work at St. Martin's special care was devoted to this particular point.

It seems to us that the worst that can be said against the process is that in the smoky atmosphere of a great city, soot and moisture will be deposited on the surface of the pictures, and that this moisture will carry with it "dissolved sulphuric acid from the atmosphere,"

but the pictures will wash, and can readily be washed, though in a country atmosphere they will not probably often need it. It is unnecessary to point out that distilled water must be employed for these ablutions.

Brief reference should be made to the use of this process for external work, and we would add that we have been provided with satisfactory testimony as to its permanence from Professor Lindenschmit and others, who speak from long experience and in no uncertain words. In this country Mr. F. Shields has painted a lunette over the entrance to the chapel in Hyde-park Place, and he will, we trust, state his views as to the use of this process, and the day may not be far distant when we may hope to be reminded by decoration on the exterior of our churches of the little Alpine Chapel which Browning describes as follows:

"It has some pretension, too, this front,  
With its bit of fresco half-moon wise  
Set over the porch, art's early wont;  
'Tis John in the Desert, I surmise,  
But has borne the weather's brunt."

As we believe that St. Martin's, Wonerah, is the first church in this country in which this process has been adopted, we may be permitted to briefly indicate the scheme of its decoration. This has already been described by the architect of the church, Mr. C. Harrison Townsend, of 29 Great George St., in a paper submitted to the Institute of British Architects in February, 1894. He says that, "Throughout the whole of the design of my little building I bore in mind the intention of decorating its interior in polychrome. As this feature was to be its main feature, the exterior, for instance, was kept entirely plain and simple; and effect was gained by proportion and color-value of its material, rather than by any elaboration of detail or mouldings. In the interior the problem was to obtain, notwithstanding the unusual lowness of the building, a maximum amount of surface—there not being a flat ceiling—upon which to execute a series of all but life-size subjects. This the semicircular form of ceiling enabled me readily to do, the springing line of which is but seven feet from the floor. About half-way towards the highest point of this barrel-ceiling a moulding runs the length of the church, and while it is proposed that the upper portion shall be enriched in plaster surface ornament and solidly gilded, the surface below this moulding to the springing line is left free for the work of the fresco-painter. Divided, as it is, by the 'bonnet heads' over the windows, it resolves itself into a series of two large spandrel pieces on each side, and of a smaller one against the west and another against the east walls."

There can be no question that the revival of mural painting is a matter of much interest and importance, and we will conclude by a brief reference to authorities on decorative art. We would first appeal to the old painter, Cennino da Colle, who in the beginning of his famous "*Treatise on Painting*," quaintly traces the history of art by reminding us that "Adam began by digging and Eve by spinning." "Then," he adds, "followed many arts; now the most worthy is science; after which comes the art derived from science, and dependent on the operations of the hand, and this is called painting, for which we must be endowed with imagination and skill to discover things (concealed under the shade of nature) . . . and well does painting deserve to be placed in the next rank to science and to be crowned by poetry." The place of decorative art is, indeed, a very high one, as Mr. G. F. Watts told us when Mr. Rivington's paper on silicate painting was read to this Society in 1884. Mr. Watts wrote as follows: "The highest expression of painting as a decorative effort belongs to designs composed with reference to architectural combinations, and I cannot but feel that when the habit of producing such works falls into absolute disuse, art must take the lower place of being only a luxury." Later still, Mr. William Morris has told us that "the position which we have to face is this; the lack of beauty in modern life (of decoration in the best sense of the word), which in the earlier part of the century was unnoticed, is now recognized by a part of the public as an evil to be remedied if possible . . . but no general sense of beauty is extant which would force us into taking up the dropped links of tradition, producing genuine organic art."

The authors of this paper hope, by the use of a process which can be trusted, to revive the old traditions of mural decoration, and they believe this paper will show that in making the effort the artist and the chemist must work together.

#### DISCUSSION.

MRS. LEA MERRITT said her part in the paper was limited to the technical details, and she thought Professor Roberts-Austen made one little slip in reading it when he said that after treating the wall with acid it should be washed: as she understood the acid was left on until the second coat of silicate was applied.

PROF. ROBERTS-AUSTEN said that was how the statement in the paper originally stood, but he had been informed that evening by Mr. Rivington that Keim recommended washing, as it tended to drive the silicate farther in.

MR. BATTEN asked if the pigments were mixed with water only, or was anything used to make them adhere.

MR. WALTER REID said he thought it was evident that the pigments were not converted into silicates, but were really enclosed by

<sup>1</sup> Twelfth Report of the Commissioners on the Fine Arts.

<sup>2</sup> "Arts and Crafts" Essays. Rivington, Percival & Co., 1893, p. 153.

<sup>3</sup> Copy of Memoranda by Prof. Church, furnished the First Commissioner of Works, Parliamentary Paper, c. 7,651. 1893.

<sup>4</sup> Journal of the Royal Institute of British Architects, Vol. I, 1894, p. 247.

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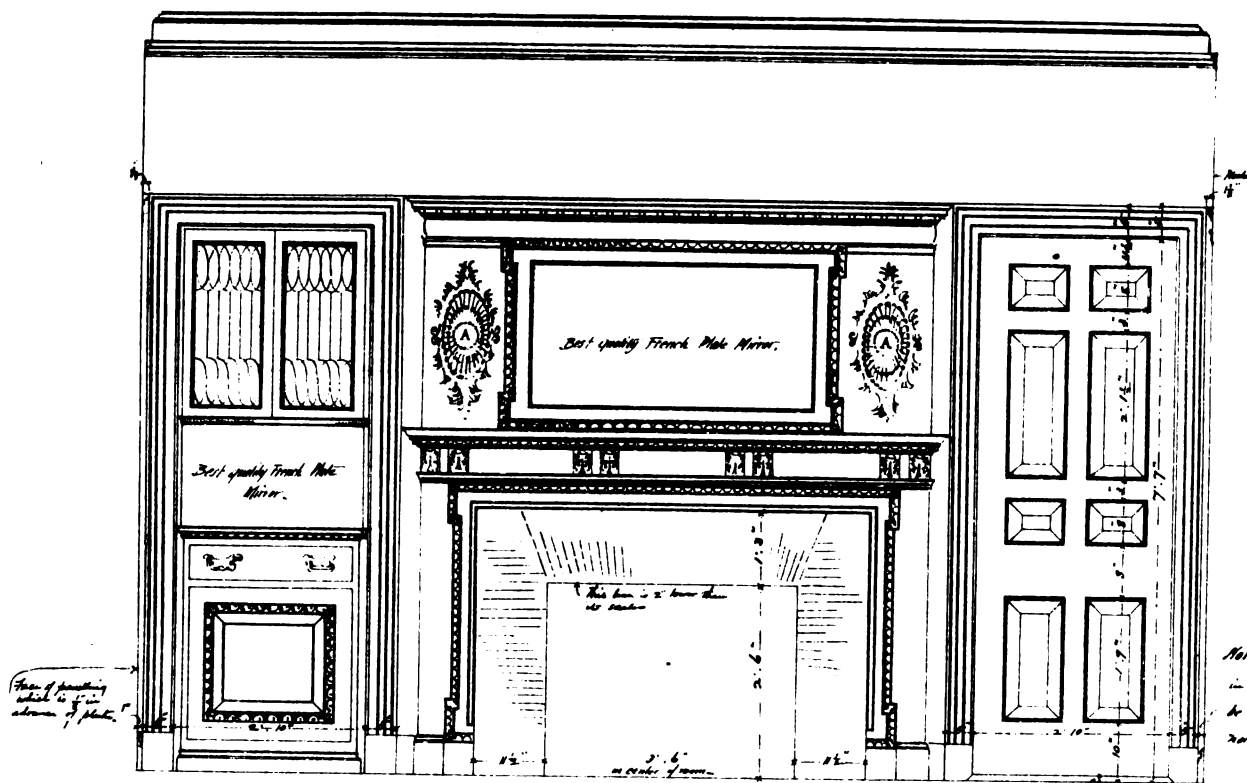
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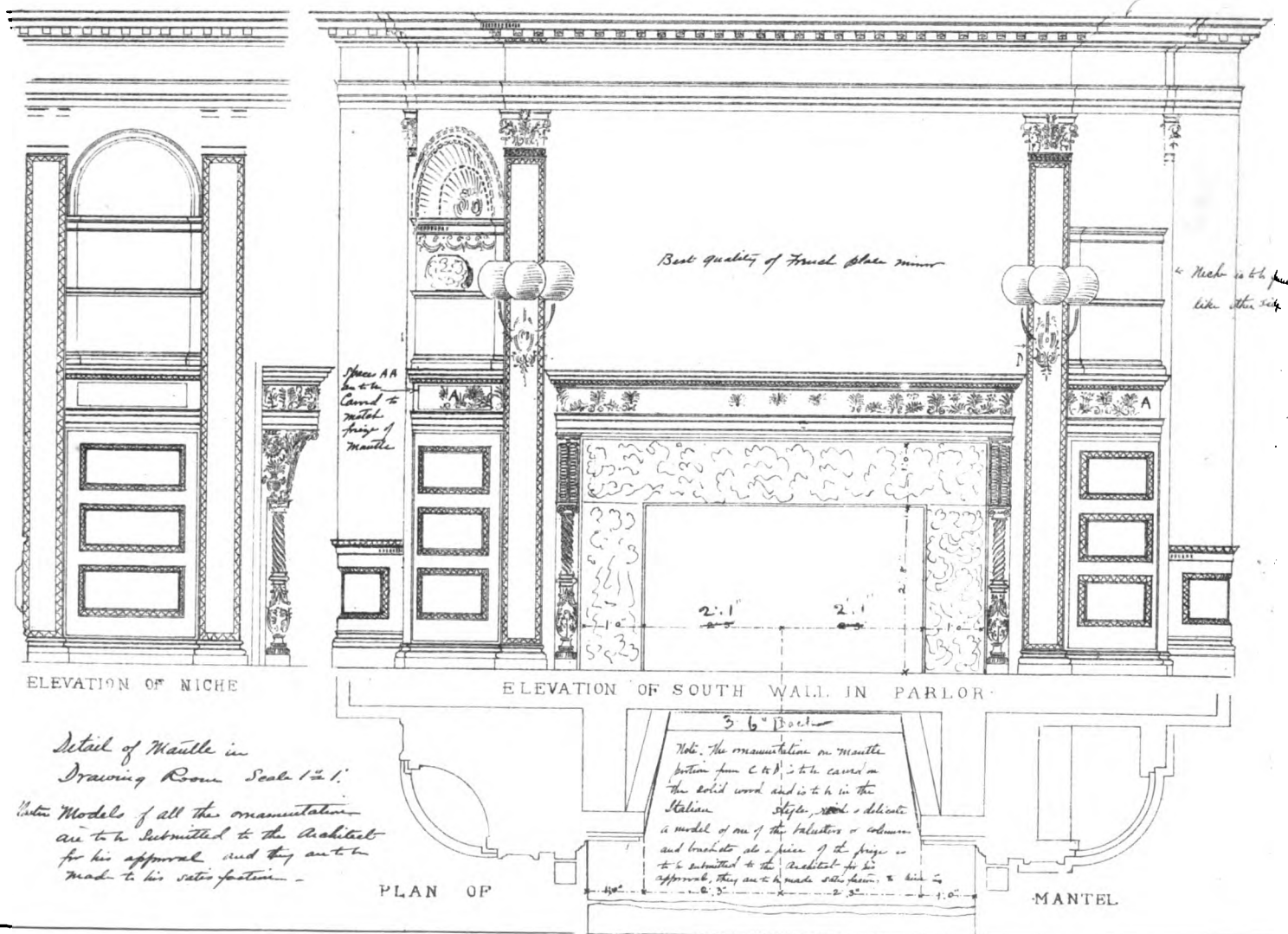
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Note all measurements for this work must be obtained at the building after the finished live places are built. A. A. represent location of gas. Figures herein given are approximate.

SOUTH WALL OF DINING ROOM.



ELEVATION OF NICHE

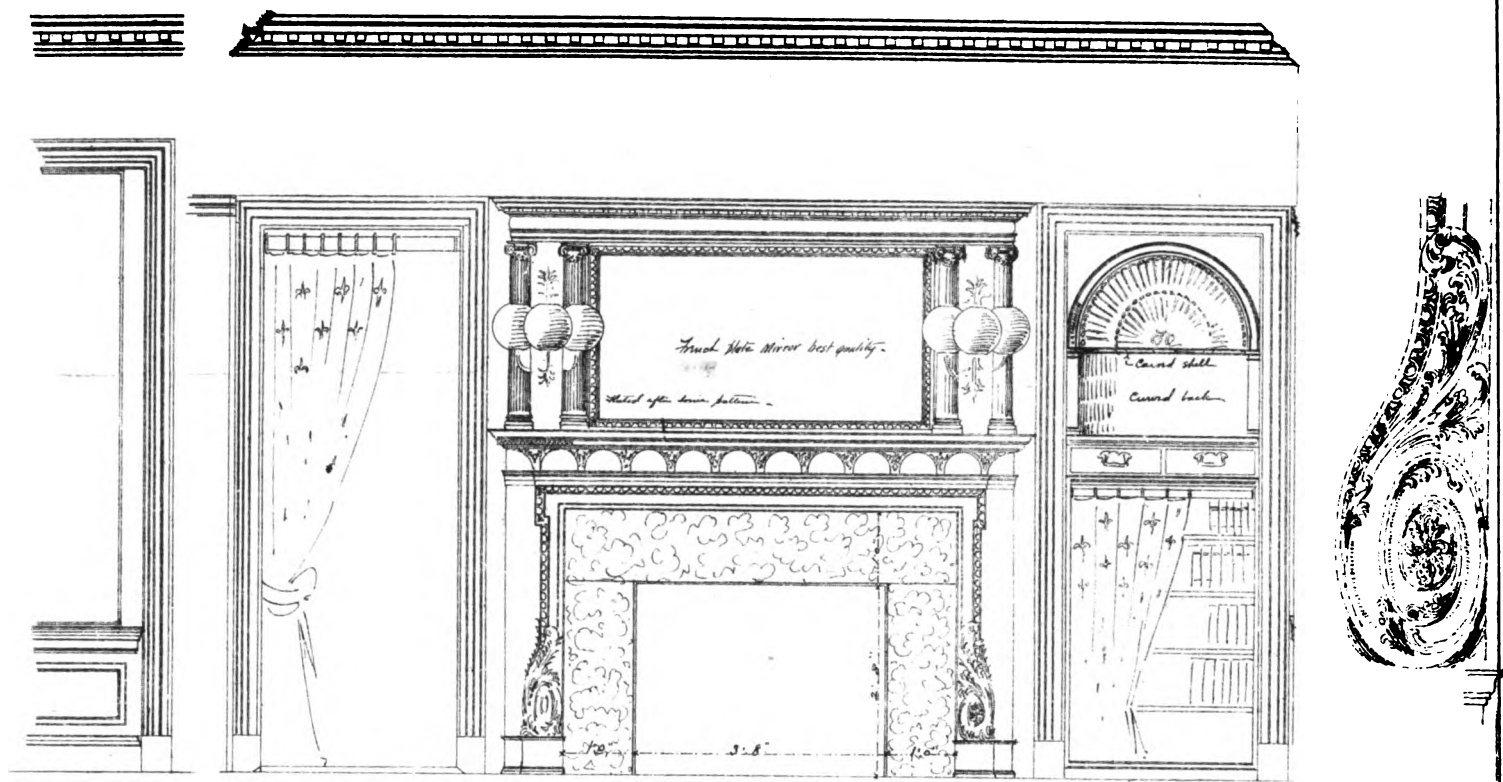
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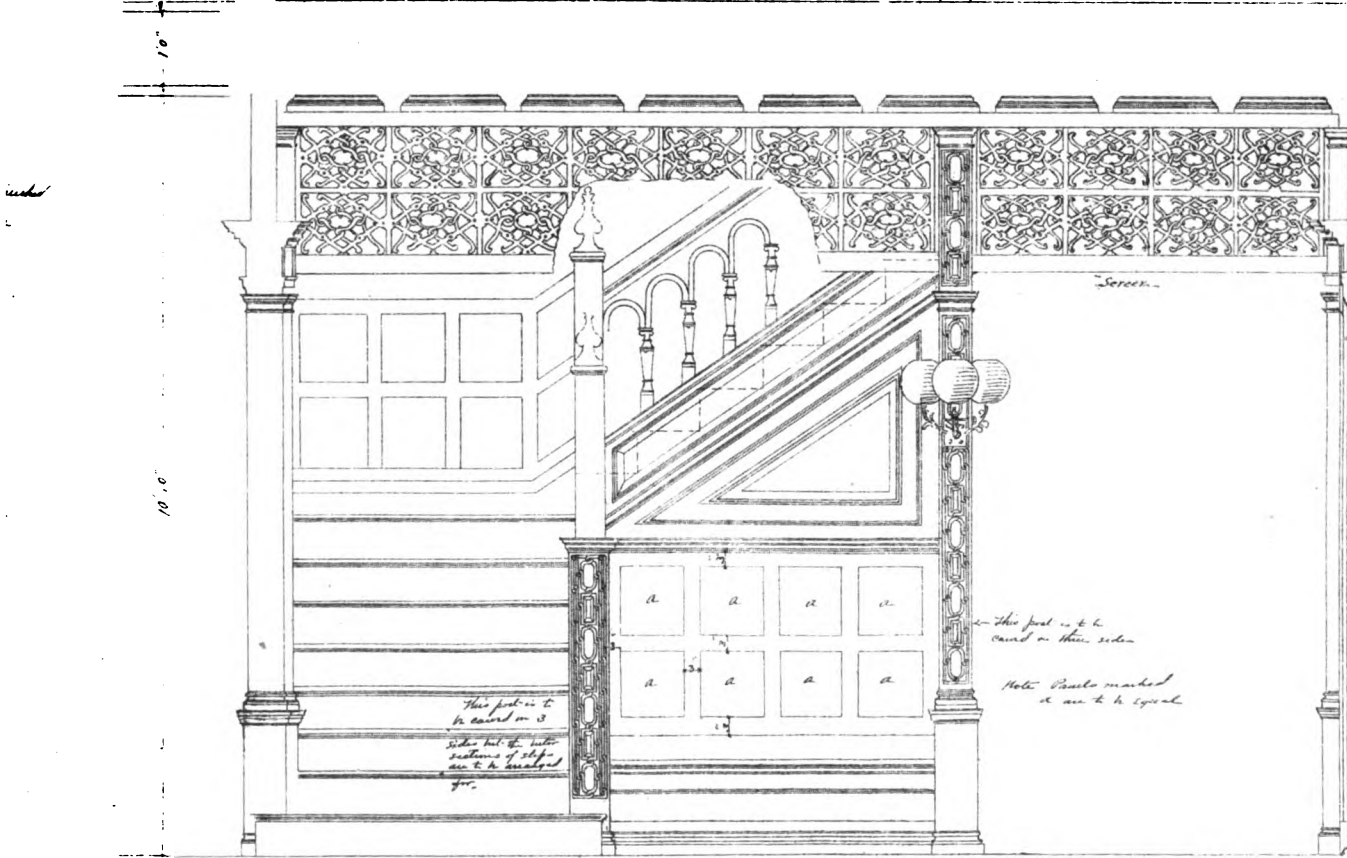
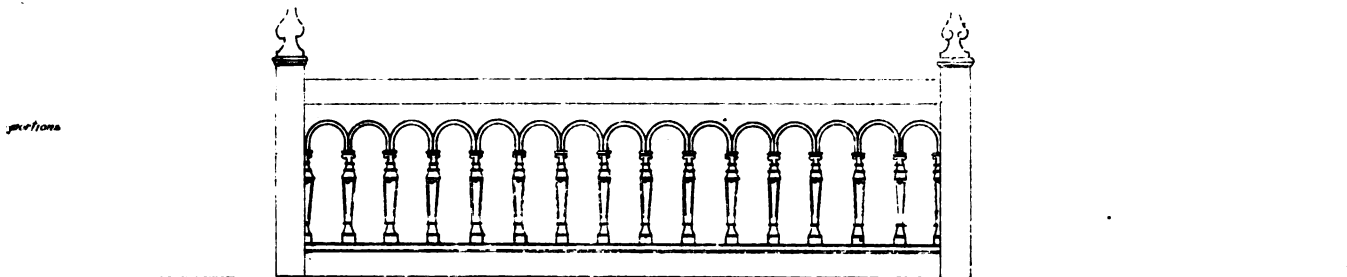
MANTEL

Detail of Mantle in  
Drawing Room Scale 1"=1'.  
Water Models of all the ornamentation  
are to be submitted to the Architect  
for his approval and they are to  
made to his satisfaction -

Note. The ornamentation on the upper portion from C to D is to be carved on the solid wood and is to be in the Italian style, ~~and~~ delicate is a model of one of the balustrades or columns and brackets also a piece of the frieze is to be submitted to the Architect for his approval. They are to be made sufficiently large



• NORTH WALL OF SITTING ROOM •



ELEVATION OF EAST WALL OF MAIN HALL.

Samuel J. O'Brien Architect  
35 Congress Street  
Boston, Mass.

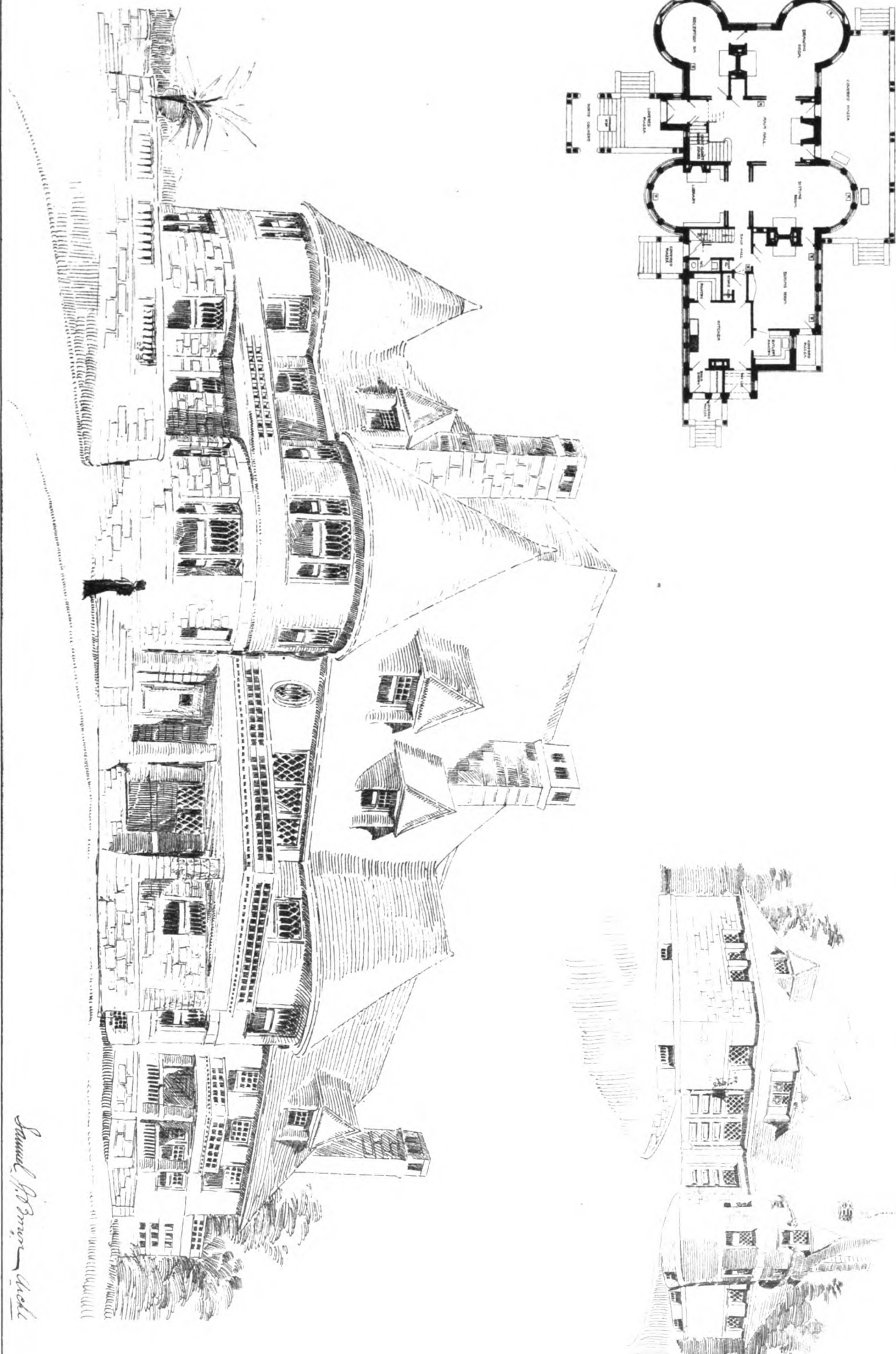
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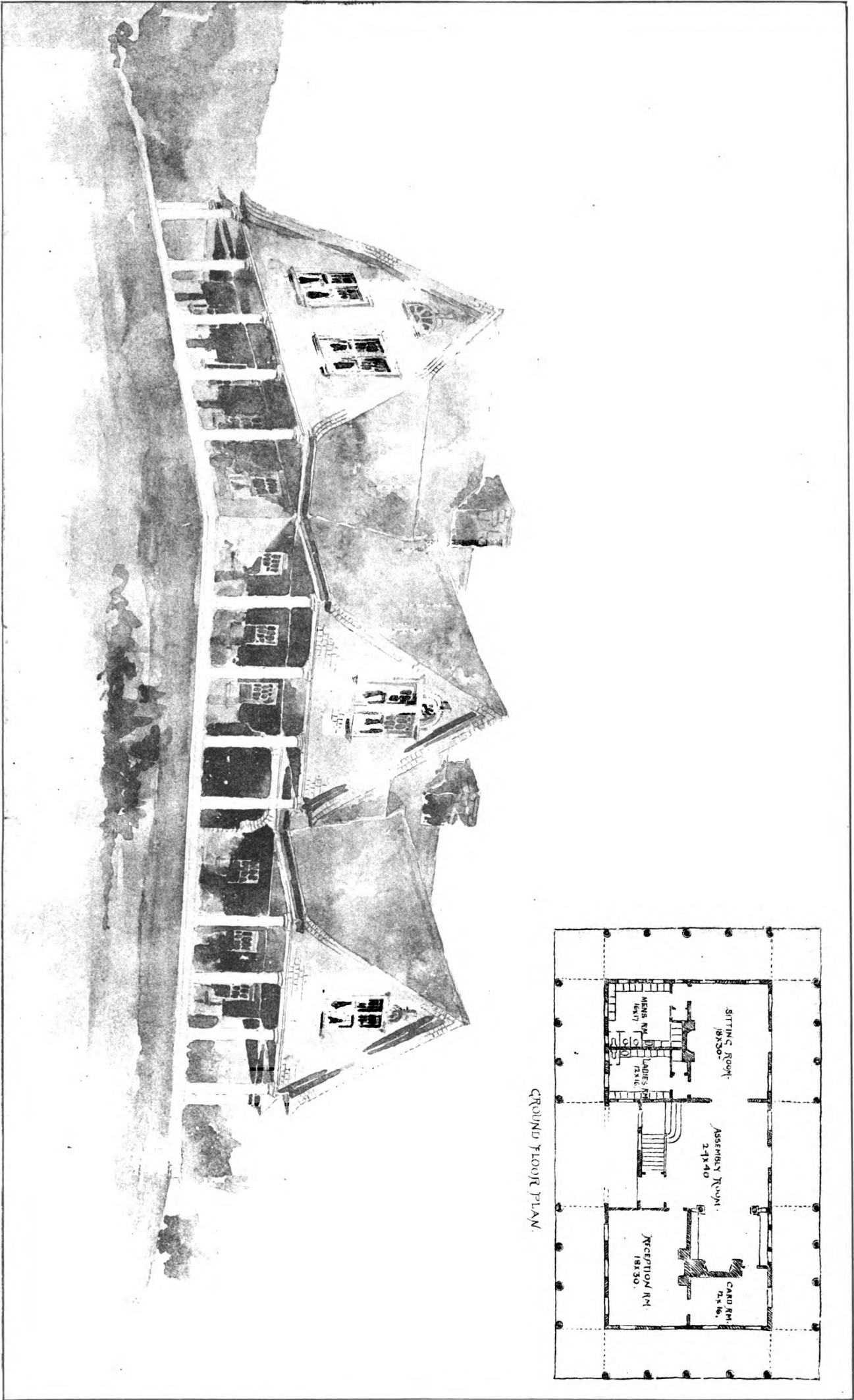


HOUSE AND STABLE OF A. N. BELDING, ESQ., ROCKVILLE, CONN.  
S. J. BROWN, Architect.



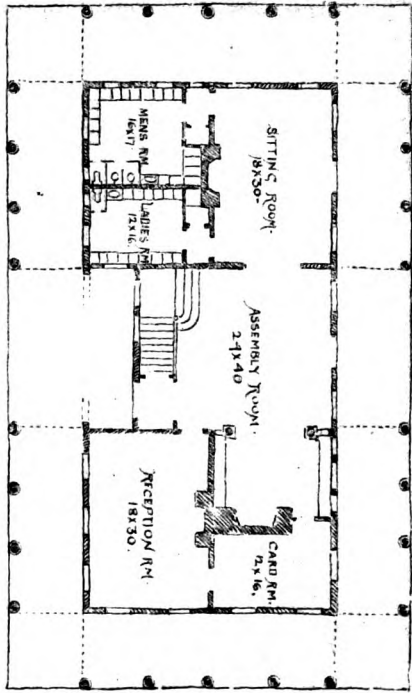


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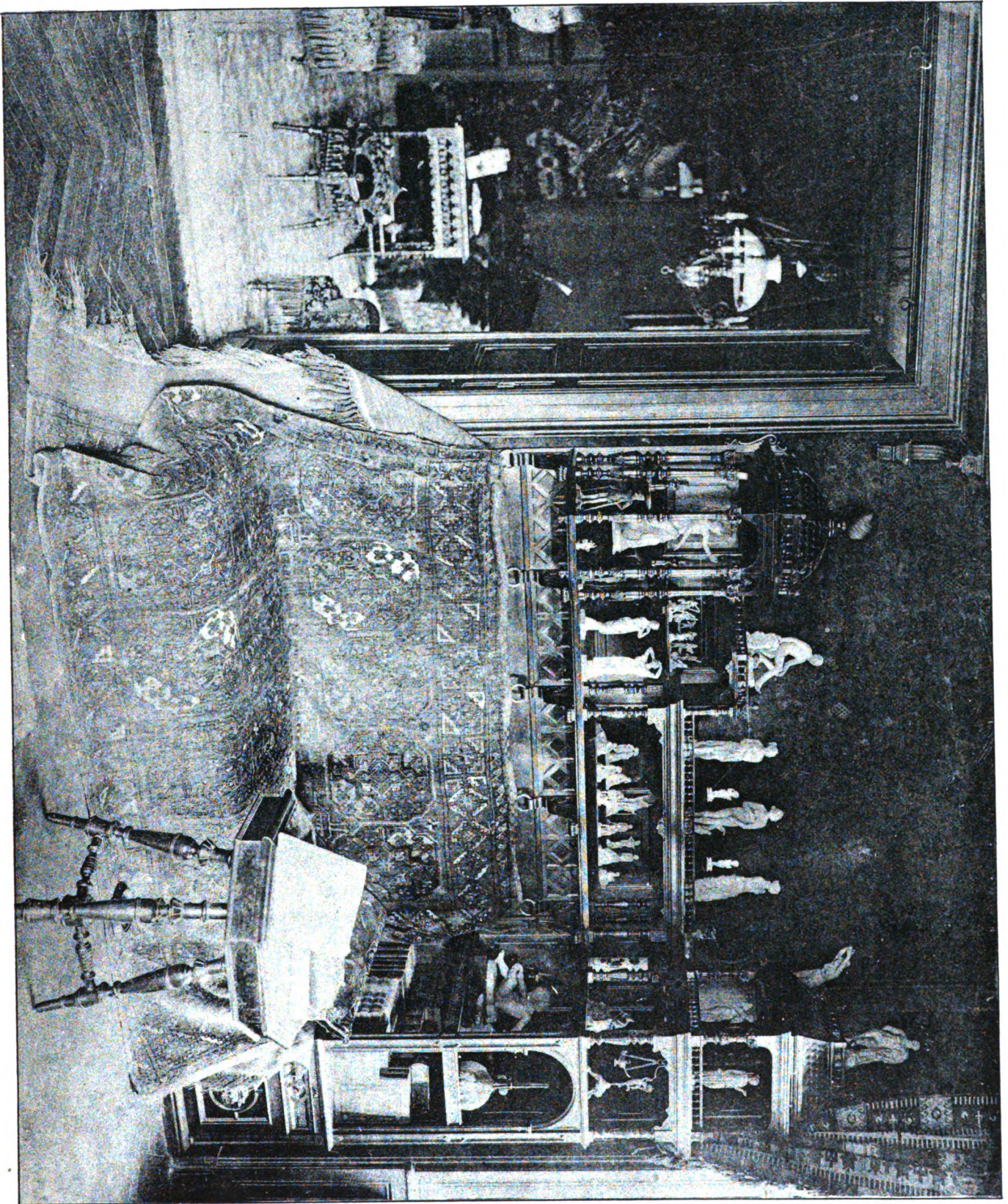
GOLF AND COUNTRY CLUB, RIDGEFIELD, CONN.  
WILLIAM A. BATES, Architect.

PHOTOGRAPH BY J. H. BATES





INTERIOR IN THE APARTMENT OF BELA KRISTINKOVICH, ARCHITECT, BUDA-PESTH, HUNGARY.



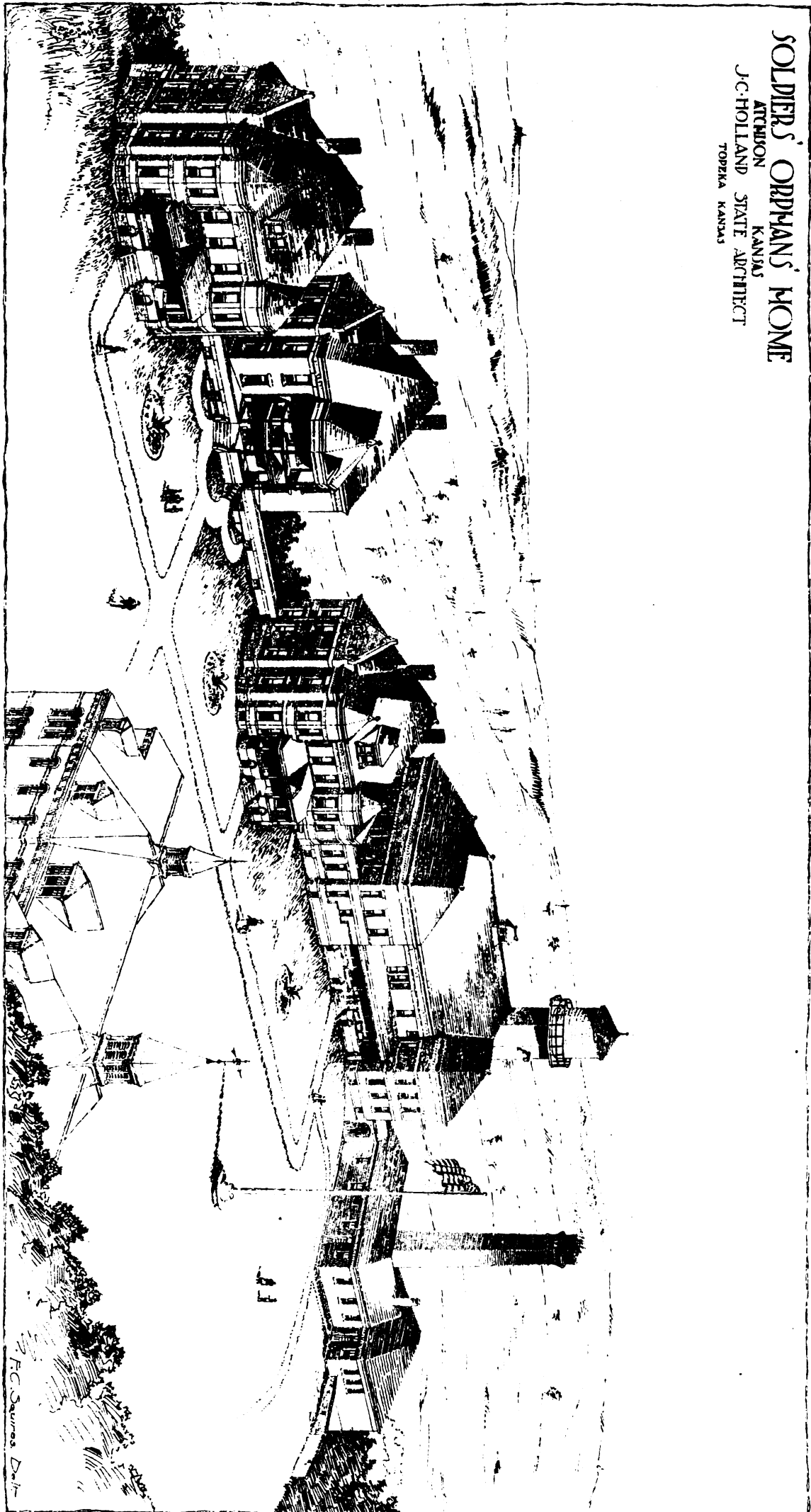






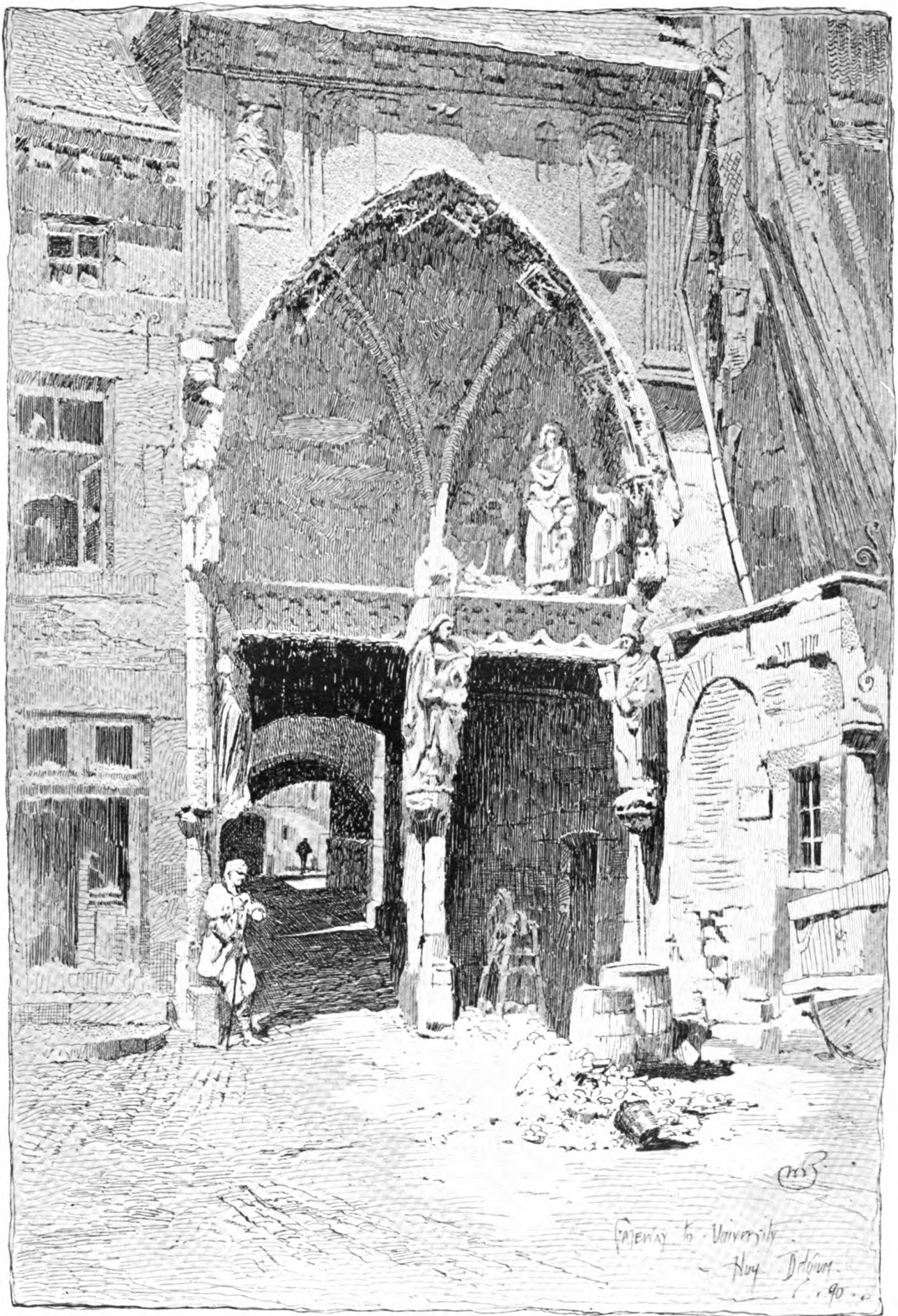
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SOLDIERS' ORPHANS' HOME  
ATCHELSON KANSAS  
J.C. HOLLAND STATE ARCHITECT  
TOPICKA KANSAS



J. C. Saunders, Del.  
HILGOTT'S PRINTING CO. BOSTON





GATEWAY TO UNIVERSITY, HUY, BELGIUM.

SKETCHED BY W. W. BOSWORTH.

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gelatinous silica, for the simple reason that in many cases the silicates were of a different color from the oxides; for instance, red oxide of iron, if converted into silicate, would become a dirty green. The real essence of the matter was the foundation to which the pigments were applied, and the failure of most other kinds of mural painting was due to the imperfect preparation of the wall. The film of color must be so thin that any crack or alteration in the surface would make it flake and peel off. This reminded him of the extreme care used by those artists whose paintings had lasted longer than any others, the Greeks and Romans. The way in which they prepared their walls was described by Vitruvius, as carried out in Pompeii. They took first rough-cast plaster of sand and lime, but the sand was *puzzolano*, which rendered the lime hydraulic, and probably in London one would try to substitute for it ground brick, or pulverized burned clay, as Vitruvius recommended for use in localities where *puzzolano* could not be obtained. This point was important, because the foundation being a silicate, there would be the same expansion and contraction by variations of temperature or moisture as there was in the film upon it; if there were the slightest difference in the coefficient of expansion, the film must go. A second and a third coat, each being thoroughly dried, were added, and then three coats of marble-dust and lime were applied in the same way, so that there were six coats in all. This care, however, was amply repaid. He had himself examined some very beautiful frescos by Kaulbach, in front of the museum in Berlin, and also the efflorescence from the surface, which was mainly carbonate of potash and soda, especially soda. There was a great difference between that and the efflorescence which occurred here, which was chiefly composed of sulphates, arising from the many sulphur acids present in the London atmosphere. An efflorescence of carbonates did not do nearly so much damage as sulphates, and sulphate of soda was specially injurious. In damp weather it sank into the plaster, and in dry weather crystallized out again, so that there was a constant action going on similar to that of the freezing of water, which would disintegrate the best building-stone. He had made many experiments on the presence of such sulphates in limes, and suggested that any lime to be used for such artistic purposes should be burned, not with coal, but with some fuel which did not contain sulphur, such as petroleum or wood. Sulphur would then be eliminated at any rate from the background, and as it might be hoped the surface would be impervious, that would prevent it entering from the front, and there would thus be a good chance of the painting remaining uninjured. He should like to know if any paintings executed in this method had stood the test of exposure for any length of time. The phosphoric acid had been proposed by Kuhlman, of Paris, and from a chemical point-of-view he should think it might have advantages over hydrofluosilicic acid. Phosphate of lime was almost perfectly insoluble, and would protect the other pigments, but fluosilicate of lime was something soluble. Fuchs, in Germany, was the inventor of stereochromy in 1825, and Maclise did not use it in this country until about 1859 or 1860. In conclusion, he might say that he had found slate, which did not exfoliate when ground, a capital foundation for painting on, and if it were employed and the colors fixed with silicates, he believed the work would stand almost anything.

MR. R. HALLWARD said if it were not out of order he should like to say a word in favor of tempera. He had used it a great deal, and though he could not speak from long experience, so far he had found it permanent. But, going beyond his own experience, there were churches in Norfolk and Suffolk decorated in this manner; and he had recently been looking at the roof of Palgrave Church, which was probably of the fifteenth century, and though the work was comparatively simple, not pictorial, he believed it retained all the beauty and color it had originally. He lately came across some words of Ruskin, the purport of which was that, as the result of many exhaustive inquiries, he came to the conclusion that all the finest work on the walls of the churches in Italy during the best period was executed primarily in tempera. He had not studied the Italian work sufficiently himself to give an opinion, and whether Mr. Ruskin had at all confused the original work with retouching afterwards, he could not say, but he did not think he had. If this were so, the enormous advantage of tempera was obvious; it imposed no conditions whatever; the artist could work with the greatest freedom, and express himself with as much facility as in oil-painting. You could absolutely do what you liked with it; it should be as much in the surface of the wall as on it. It was a thin medium when properly used and sank into the walls, and that, he believed, was one reason for its permanence.

MR. H. JACKSON suggested that if this process insured that there should be no change at all in paintings after their execution, it would not permit of that mellowing by the hand of time which was generally considered to add beauty to works of art.

SIR HENRY DOULTON said he was not prepared to say anything about the process itself, but he had seen the examples in Womersley Church, and thought them very beautiful.

MR. WESTON asked the strength of the acid used.

THE REV. J. A. RIVINGTON said he was very glad the point had been insisted on that this process was not fresco. As long as the public or those interested in art were under the delusion that they were trying to revive fresco-painting by this means, nothing would come of it. He was also much obliged to Professor Roberts-Austen for the rock sections he had shown, which had carried the science

of the subject into an entirely new sphere. Since he first brought forward the matter, nearly twelve years ago, he had seen reason to modify a great deal of the chemistry he then put forward, but during this period his faith in the process had increased. He had paid frequent visits to Munich, and had seen great works of art on the exteriors of buildings which had withstood the atmosphere of a large town and of a climate much more severe than that of England. Only recently he saw pictures which he assisted in fixing twelve years ago, which retained their colors perfectly; some blocks of houses, almost giving the impression of entire streets, were painted from top to bottom in this process, and nowhere was there any sign of failure which could be attributed to any defect in the process itself. There had been mishaps now and then, but they had always been traced to neglected work. He regretted that Mr. Shields, who had trodden in Mrs. Lea Merritt's footsteps, and was as enthusiastic as herself, was unable to be present. He had completed two lunettes to go over the doors in Hyde-park Chapel, which would be visible as soon as they were fixed, which he should be doing on the following day. The interior of the chapel was about to be done entirely in this process, so that by next summer there would be an opportunity for every one to see what it was capable of. Water was the only medium employed—it was a pure water-color process; filtered rain-water would do in the country, in London it must be distilled. He pointed out in his former paper that it was Roman and Greek work which Keim had taken for his models, and he had, somewhere, samples of Pompeian frescos showing the coarser ground underneath and the finer on the top, but could not put his hand on them that evening. There were, however, only two grounds; six were not required. Mr. Keim eliminated all soda from his fixing and hardening solutions in order to avoid the evils Mr. Reid had mentioned. There were paintings abroad which had stood for fifteen years exposed to very bad weather; one in particular he had in mind, on the outside of a church, which stood above the other buildings in the town. The winter there was very severe, and after a heavy rain sometimes a sharp frost would come and the whole painting had been at times covered with a thin coating of ice; but when the thaw came, it proved every time that the painting had stood perfectly. As yet there was not the slightest indication of a flaw, either in the painting or the ground underneath it. He had no doubt that ground-slate would form a durable surface, but feared the expense would be prohibitive. Mr. Keim at first used pumice-stone, but gave it up afterwards, and as far as one could judge, quartz sand answered every purpose. There was something else developing now, but he was not yet able to give any details with regard to it. One gentleman remarked that the simpler a process was the better, but although this process sounded complicated, the artist had nothing to do with the complication. Nothing could be more direct or simple than the artist's part of the work. He had simply to mix his paint with water and put it on. All the trouble was for the workman who prepared the surface, and he believed from a workman's point-of-view it was as simple as possible. The trouble and complication was for the chemist who tested it. Whether one could ensure that there should be no change was entirely a chemical question, but though he was not an artist, he devoutly hoped the chemistry of this process would effectually protect it from the mellowing hand of time. If he were painting a picture he should be very sorry to think that any mellowing hand was required to improve his work. This idea reminded him of a time when the object of English art was to produce a so-called "black master," but he hoped that time had gone forever.

PROF. ROBERTS-AUSTEN, in his reply, first drew attention to two palettes on the table, one of which had been exposed for some months to the atmosphere of his laboratory; but he really could not tell, from observation, which it was. He also had specimens of painting on cloth and canvas, lent him by Mr. Rivington, which had been saturated with spirits-of-wine, and then fired to show how durable was the work. A little picture, by Mr. Rivington, showed that he was over-modest in disclaiming the title of an artist. In answer to Mr. Reid, he might say that he had deliberately rejected phosphoric acid, for though phosphate of lime was not insoluble, phosphate of potash was nearly so. With regard to tempera, he should think a careful inspection of the Florentine churches would convince any one that they had suffered very much from time; and probably Mr. Ruskin had retouching in view when he used the words referred to. They all revered Mr. Ruskin, but probably, if any one showed him tempera work in an advanced state of decomposition, he would say that did not affect anything he had said with regard to tempera generally. The strength of the acid was stated in the paper; he believed it was about twenty-four per cent. With regard to the question whether these paintings would undergo change from the atmosphere, he feared that in London there would be some degree of "mellowing," quite apart from any chemical change, which he hoped would not occur, but that frequent ablutions and occasional flicking with a silk handkerchief would really preserve the pictures. The experiment was now being made whether the paintings were really permanent; he could only, as a chemist, express his firm belief that they would be.

THE CHAIRMAN said he hoped one result of this paper would be to bring about greater enthusiasm for mural decoration, which, in his time, had ceased to be in demand at all. The unfortunate failure of fresco-painting gave an excuse to people who had no real interest in art to forswear mural decoration altogether. Artists

must take something on trust, but they now had a chemical assurance, backed by some amount of practical experience, that this work would be permanent. No doubt Ruskin expressed a preference for tempera-painting over fresco, but he associated fresco with the decline of art. Shakespeare said, "Fortune rarely comes with both hands full," and the time when fresco-painting was introduced was just the time when that simplicity of invention which Ruskin so much admired was beginning to disappear. Many of his disparaging references to Michael Angelo had a good deal to provoke them; there was something a little bombastic in his style which was very repugnant to Ruskin, and he failed to appreciate what was really great in his work. But in condemning fresco, he was condemning what was accidental, not what was essential to it. He (the Chairman) remembered one example, the Santa Maria Novella, which was very much affected by the weather; in other cases where the paintings had been better protected they had been preserved very well. It was evident, however, that some more trustworthy process was wanted. No doubt in looking at some old pictures they had a feeling that the "mellowing hand of time" had added beauties to them, as in some instances of the quattro-cento and cinque-cento period in the National Gallery, where the colors had not only been preserved, but something like a process of vitrification had taken place which gave them almost the appearance of precious minerals, but in the majority of cases a very different kind of change had taken place. No one could persuade him that the brown masses of foliage, rich brown as they were, which came close up to the edges of the flesh, illuminated by a strong light in Titian, were brown originally; they were green, and the green had gone. They admired them now, but they would admire them much more could they see them as they were originally. Mr. Ruskin on one occasion referred to this prejudice in favor of the changes in old pictures, and said a picture was never so perfect as at the moment it left the painter's easel. He believed it was the case except where the enamelling process he had spoken of took place. There was a deplorable lack of appreciation of grand art in England. The artist must bow to the caprices of rich people who wanted to decorate their drawing-rooms, where a grand serious picture was felt to be out of place. Such works must be in public buildings and churches, and every excuse for neglecting such opportunities should, if possible, be taken away. For this reason he hailed the present paper, and concluded by proposing a vote of thanks to Professor Roberts-Austen and Mrs. Lea Merritt.

#### THE ALDRICH PUBLIC BUILDINGS BILL.

A BILL has been introduced by Representative Aldrich, of Illinois, providing for the securing of plans and for the erection of the public buildings of the United States, and it is the intention of Mr. Aldrich, who was formerly Commissioner of Public Works of Chicago, to endeavor to secure the passage of the measure.

The following are the provisions of the bill:

**Section 1.** That the President, by and with the advice and consent of the Senate, shall appoint a Commission on Public Architecture consisting of three architects of high scientific and artistic attainment and large practical experience, and two officers of the Engineer Corps of the United States Army. If necessary, a separate appointment of any or all of three members of the Commission who are architects may be made for each building under consideration, and members of the Commission for one building may act upon other buildings. That the Commission, under the general direction of the Secretary of the Treasury, shall discharge all the administrative duties relating to the procuring of designs and the appointing of architects for all buildings hereafter erected by the Government of the United States.

**Section 2.** That the Secretary of the Treasury shall be the President of the Commission *ex-officio*, and the Supervising Architect of the Treasury Department shall be a member of the Commission *ex-officio*. In the absence of the President of the Commission one of the members shall be elected as Chairman by ballot, and he shall preside at the meetings and perform such other duties as the rules of the Commission may prescribe; and the Supervising Architect of the Treasury shall act as Secretary of the Commission.

**Section 3.** That the Secretary of the Treasury shall convene the Commission whenever in his judgment the exigencies of the service require it.

**Section 4.** That the Commission shall adopt rules and regulations governing competitions in the procuring of designs and for the government of its meetings and the general performance of its duties. The members of the Commission shall be paid their actual expenses and subsistence and a *per diem* allowance of \$10 while actually engaged in the performance of their official duties, but no *per diem* allowance or salary shall be allowed to any civil or military officer on account of his being employed on the Commission, but his actual travelling expenses and subsistence shall be paid while engaged thereon.

**Section 5.** That in case the limit of cost provided by law is \$100,000 or over, the Commission shall select by ballot, for each building, five architects to prepare designs in competition; in case the limit of cost is less than \$100,000, the Commission may, in its discretion, select by ballot an architect without competition. No architect shall be eligible for entering as a competitor, or for appointment, who has not had, at least, ten years' experience as an architect-in-chief, and unless he can satisfy the Commission, through work already done by him or otherwise, that he is competent to take charge of the economical construction of the building. The Commission shall cause to be made and issued to competing architects, surveys, schedules of requirements for the building, limitations of cost, and all facts which might control or influence the character of the required design. The Commission shall

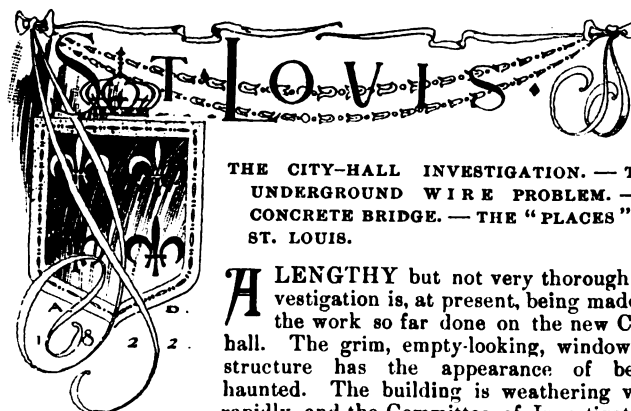
specify the number and character of the drawings required and fix a definite time for their completion. The Secretary of the Treasury, upon the recommendation of the Commission, shall pay to each unsuccessful competitor, to reimburse him for expenses incurred in preparing the competitive drawings, the following amounts: For designs for buildings to cost not more than \$150,000, the sum of \$150, and for each and every \$100,000 of the limit of cost of the building above that amount, the additional sum of \$100; but in no case shall more than \$1,000 be paid to any unsuccessful competitor.

**Section 6.** That the Commission shall reject and return to the author any drawings which have failed to exactly comply with the requirements and regulations adopted by the Commission for the competition, and no compensation for their preparation shall be paid, and the author thereof shall be debarred from all further participation in the competition. The Commission shall carefully examine the drawings of each competitor in competition, and shall select one design as the design of the proposed building, and shall recommend its author as the architect for that building and return forthwith all other drawings to their authors. The Secretary of the Treasury shall thereupon appoint the architect so recommended, and he shall perform all the customary duties performed by an architect in private practice, namely: The making of all preliminary sketches, the modification of his design to meet possible requirements of the Commission, the preparation of a set of general working-drawings to procure estimates; the preparation of a set of general details on a larger scale, a set of full-size drawings for moulded, carved or ornamental work, and a set of all other original drawings and specifications required by the Commission. He shall supervise the construction of the building, and no payment shall be made to any contractor until the certificate of the architect has been received by the Secretary of the Treasury that the work has been executed in conformity with the contract. He shall file a complete set of the construction-drawings in the Treasury Department, from which all duplicates shall be made, which duplicates shall be paid for out of the appropriation for the building. The architect shall be paid for his services a fee of five per centum upon the total cost of the work and the usual travelling expenses. The expenses of the Commission and the fees of the architect shall be paid by the Secretary of the Treasury out of the appropriation for the building in the erection of which they were incurred.

**Section 7.** That the Secretary of the Treasury, upon the recommendation of the Commission, shall authorize the architect to employ a competent Clerk-of-the-works, at a salary to be established by the Commission, and he shall be paid for his services out of the appropriation for the building.

**Section 8.** That the Supervising Architect of the Treasury Department, under the direction of the Secretary of the Treasury, shall be the representative of the Government in all matters connected with the erection and completion of public buildings and the payment therefor. He shall receive proposals for the work, and, with the approval of the architect of the building, he shall award the contracts therefor. He shall perform all other duties that now pertain to his office, except such duties as are vested by this act in the architect of the building.

**Section 9.** That all acts and parts of acts inconsistent with this act are hereby repealed.



THE CITY-HALL INVESTIGATION. — THE UNDERGROUND WIRE PROBLEM. — A CONCRETE BRIDGE. — THE "PLACES" OF ST. LOUIS.

A LENGTHY but not very thorough investigation is, at present, being made of the work so far done on the new City-hall. The grim, empty-looking, windowless structure has the appearance of being haunted. The building is weathering very rapidly, and the Committee of Investigation, such as it is, is uncompromisingly slow in its work, such as that is. Mayor Walbridge called Mr. McMath, the President of the Board of Public Improvements, into consultation recently and asked him what all the delay meant. Mr. McMath's answer has not been made public, but after a similar consultation with Mr. Marshall, the City Counsellor, the latter requested the Committee to go into executive session. Mr. Marshall then addressed the Committee to the effect that the investigation as it was being conducted must be stopped, and that the Committee must either bring its work to a close or pursue a different course of investigation in the future. He pointed out to them that their labor to unearth anything new had been futile, and that to continue their open sessions with insinuating questions as to the honesty of reputable men, who must stand innocent in the eyes of the community as well as in the eyes of the law, was wrong and should not be countenanced. He, therefore, suggested to the Committee that their future investigation be conducted outside of the committee-room, the Committee dividing itself into sub-committees with an assignment to each to pursue a certain line of investigation, and that when these lines are exhausted the Committee should quietly get together, compare notes and block out other work until they have either completed their investigations or discovered matter requiring the evidence of witnesses in open session.

Mr. Marshall's advice has been followed out, but such a short

time ago that we are unable to say with what success. It can be put on record though, that the Committee, or sub-committees have taken decisive action. A note has been sent to the Board of Public Improvements stating that it is the sense of the Committee that a more rigid inspection of the work at the new City-hall is absolutely necessary; that the manner in which some of the contracts are being carried out is not satisfactory; and that the Board should at once proceed to adopt remedial measures, instead of waiting until the work is completed.

A number of witnesses were examined by the former Committee. One of them stated that on personal inspection he discovered that eight of the steel columns in the building were full of blow-holes, and that there might be others for all he knew. The workmen have recently been covering up the greater part of the steel-skeleton work with fireproofing, and in consequence, work has been stopped until the investigators look after this part of the make-up of the structure and find out the defects. That this work should even have been allowed to commence without any faults or defects whatever being made known, is, of course, gross mismanagement. The idea at first was to use terra-cotta instead of stone trimmings, on account of its matching so well with the brick and being cheaper, but, fortunately, it was agreed that it was too undignified, and a buff limestone was finally decided upon. It is complained that the price paid for the latter, \$152,000, was too high, one witness saying that he was sure that it could have been bought for \$30,000 less. This is amply made up for though, in the Missouri red-granite contract, which was awarded to Schneider & Co. They lost \$60,000 on what we consider the best work yet furnished. The granite supplied by them is of a fine red quality, but in our opinion it is not only entirely too dignified for the other materials in the building, but too heavy for the style of architecture adopted — French Renaissance.

Another difficulty has arisen, namely, a conflict of authority. This matter was brought to the attention of the Investigating Committee recently by one of its members. He stated that he had gone through the building and had talked with the architect, Mr. Mann. The latter complained to him that the orders he gave were ignored, and that the inspectors appointed by the Superintendent of the Board of Public Improvements, Mr. McMath, were the only people whose orders were obeyed. The member asked Mr. McMath to explain the position Mr. Mann was supposed to occupy. He said that he was informed by Mr. Marshall, City Counsellor, that as President of the Board of Public Improvements his authority was above that of Mr. Mann, and if the latter had any orders to give they should be given through his [Mr. McMath's] clerk. This unprecedented state of affairs is certainly appalling and must be decidedly humiliating to Mr. Mann. The idea that the President of a Board of Public Improvements, elected simply for political reasons and not because of any qualification for the position, should dictate to the architect of a building, is an astounding piece of downright insolence. As one of the members of the Committee asserted, there is hardly any use of employing an architect at an expense of 5 per cent of the cost of the structure. Mr. McMath obtains this authority, according to City Counsellor Marshall, from the city charter, which stipulates that all power and authority in a case like the present one is vested in the President of the Board of Public Improvements. In the face of this, the ordinance providing for the erection of the City-hall states that the architect is to be supervisor of the building. This is another example of careless and shiftless legislation, doing things by halves. Under the circumstances, Mr. McMath could give way gracefully to Mr. Mann, but there is an undercurrent of some kind which has been hampering the architect ever since the present administration got into power. During this time the entire new City-hall affair has been a grand fizzle. The project was conceived wrongly and has been gone about wrongly. The method employed in such cases in our larger cities should have been adopted, and the money to pay for the structure should have been obtained through special tax or bonds, and not by reducing appropriations for other and pressing needs. The law limiting the bonded indebtedness should be repealed, the limit having already been reached. The folly of this law is apparent on its face, as the city certainly must grow and improve.

This same inaction is displayed in the underground-wire problem. The city government has had this question under consideration for the last three years, but so far as putting wires underground is concerned has accomplished nothing. The principal point to be decided just now is how to deal with all the wire-using companies collectively. The City desires to control the conduits and to compel all wires to go into one or more conduits as necessity demands. The companies have fought against municipal management, desiring to have each a conduit to itself and to control the same. Of course, such a proposition will not be entertained. There are at least eight wire-using companies, and the idea of having eight conduits on thoroughfares like Washington Avenue, Olive Street, or Broadway, is simply preposterous, for these streets already contain one wire conduit, numerous gas, water and other pipes, sewers, cable-conduits, etc. The question to be decided upon, and it is the chief one, is whether the companies shall own the one large conduit in which their wires are to be placed subject to the City's supervision, or whether the City shall both own and supervise it. In the former case it is intended that the City shall ultimately own the conduit.

As to the method to be pursued in going about the work of compelling the companies to comply with the terms of the ordinance in case

they are unwilling to do so, the Boston plan is thought to be the most effective. The latter consists in doing the work by districts, one at a time. The area to be covered by the conduits is bounded on the north by Cass Avenue, on the south by Chouteau Avenue, on the east by the Mississippi River, and on the west by Grand Avenue, a district comprising about eight square miles.

Nothing is said about the disposal of the street railway feed-wires which are strung on the poles supporting the trolley-wires in the above-named district. The feed-wires strung on pole lines coming directly from the power-houses are of course included in the conduit system. The only method of doing away with the former is to place them in conduits under the streets on which the railway tracks exist and run a short conduit for each feeder from the main conduit to the point where it feeds the trolley-wire. This is done with great success in Boston, Brooklyn and Philadelphia, the other great trolley-line centres, and we hope that this method of disposal of the great feeder-cable will be adopted in connection with the underground system.

A concrete bridge was recently completed at the suburban town of Belleville, Ill., across Richland Creek. It was built by A. Geisel & Co., of St. Louis, for \$10,500, on a contract made with the Town Council of Belleville on July 16, 1895, providing for the completion of the bridge in three months. The structure is built entirely of concrete, and the roadway is paved with vitrified brick. Its dimensions are: span, 40 feet; height, 20 feet; roadway, 52 feet in breadth. It was guaranteed to withstand a pressure of 5,000 pounds to the square foot, any portion of the structure selected by the Town Council to be tested. On November 11 last, the test was made, the bridge found to be up to contract, and finally opened for traffic. It is a very neat structure, the concrete being so shaped on the surface as to resemble stone blocks. The railing on each side of the surface of the structure is of ornamental iron, and divided into four parts by concrete pedestals, also shaped to resemble stone.

The Mississippi River Committee of the St. Louis Merchants' Exchange met recently and listened to a very interesting exposition of the workings of portable jetties for deepening the Mississippi River channel, by Capt. Thomas W. Shields, of Cairo, Ill. Captain Shields exhibited a model of the jetty or caisson, and showed its use. The caisson itself is 300 feet long, 25 feet wide and 10 feet deep. It is made of steel, hollow, and wedge-shaped at both ends. The idea is to sink a caisson on each side of a bar formed in the river, thus forcing the current over the bar and washing away the sediment. The wedge ends of the jetties are intended to direct the water over the bar, and to relieve the water when leaving the jetties at the farther ends. The famous jetties at the mouth of the Mississippi River, erected by Capt. James B. Eads, are a good example of what is desired, but on a large scale.

One of the most distinctive features of the residence portion of St. Louis is the "places." They have become so numerous of late that we fear, on account of their exclusiveness, the "No Thoroughfare" signs prevailing quite generally, they will some day prove barriers to direct communication between important streets. In some cases the main avenue divides a block into halves. The residences face the same, and, in consequence, their barns face the city streets. In other cases the avenue is merely a continuation of a street, but so improved with handsome gateways and paved in a superior manner that it is readily to be distinguished from the latter. In the latter plan the barns face the alleys, as they should. The "No Thoroughfare" sign is legally put only where the main avenue runs through the middle of a block, or when it is laid out before the location of the city streets has been determined upon. It is not permitted when the streets have been platted. The "No Thoroughfare" regulation is not meant to be universal, however, but is aimed at all heavy wagon traffic. In fact, we think the signs entirely useless, because the gateways and improved appearance are sufficient indications of the privacy of the "places." This view of the matter is borne out by the fact that Fullerton Place with no sign is just as private as Vandeventer Place with the signs very much *en evidence*, and in both cases we noted that heavy travel seeks the surrounding streets. Then, further, Fullerton Place is the extension of a street, while Vandeventer Place is not.

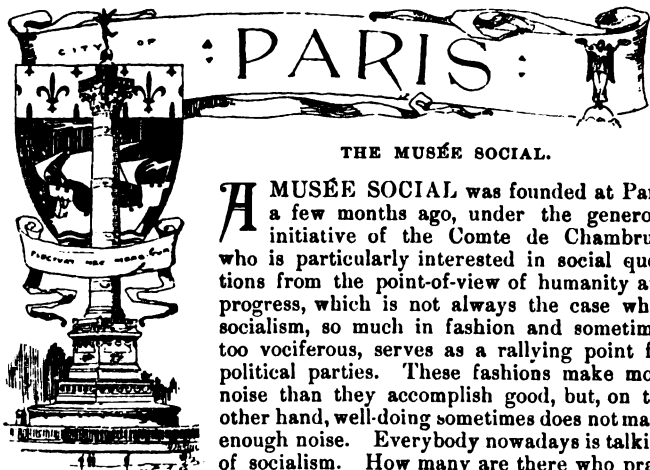
The majority of St. Louis's handsome residences are located in the "places," Vandeventer Place, Westmoreland Place and Portland Place containing the finest group of residences, perhaps, in the United States. There are more costly residences in New York, but nowhere are there so many well-grouped beautiful houses as in the above "Places." However, none of these possess the remarkable feature of Fullerton Place, the almost entire employment of the Colonial style of architecture, and the fact that all the houses were built by the same architect, Albert Swasey. The efforts of this gentleman have not been wasted in the case of Fullerton Place upon cheap, ephemeral, Colonial structures, so numerous in the suburbs of others of our large cities, but he has erected handsome residences in permanent and lasting materials.

In the building of these "places" there is generally a law prohibiting the erection of a house costing less than a certain amount, and we think there is such a condition attached to Fullerton Place, though we are not certain on this point. However this may be, there is not a house in it which could have cost less than \$30,000, which means a great deal in St. Louis, where building-materials are remarkably cheap.

We cannot speak with great favor of Mr. Swasey's treatment of

the Colonial style in some particular points, though generally speaking, he has been quite successful. There is a certain lack of that simplicity which we consider one of the most charming attributes of the Colonial style. There is often an overabundance of ornamentation, in fact, in some particular cases the style is overdone. Though this is of minor consideration, the materials are often too rich in themselves, and are better suited to the French and Italian Renaissance styles than the severely Classical and consequently plain Colonial. We noticed in one house the use of Italian marble pillars with Corinthian capitals supporting a shell-shaped arch, the whole forming the entrance. The rest of the structure is Colonial.

A mistake, too, has been made, we think, in the use of colors and materials not at all suited to the decidedly smoky and foggy atmosphere of St. Louis. This is well demonstrated in the first two houses built in Fullerton Place. They are in light brick with white or cream-colored woodwork, and are very shabby looking already, notwithstanding the fact that they were erected only three or four years ago. Messrs. Eames & Young have acted very wisely in this respect in the house they are building for Governor Francis. In this case a very dark, almost black, brick is used, and it contrasts beautifully with the pure white wood-work. The wood-work can be repainted, but the bricks cannot be touched. In the case of the Fullerton Place houses, if the wood-work were touched up, the light bricks would look not only inherently shabby, but more shabby by contrast. And we condemn the use of light brick not only in Fullerton Place, but any place else in or near St. Louis for the above-mentioned reasons.



**A** MUSÉE SOCIAL was founded at Paris a few months ago, under the generous initiative of the Comte de Chambrun, who is particularly interested in social questions from the point-of-view of humanity and progress, which is not always the case when socialism, so much in fashion and sometimes too vociferous, serves as a rallying point for political parties. These fashions make more noise than they accomplish good, but, on the other hand, well-doing sometimes does not make enough noise. Everybody nowadays is talking of socialism. How many are there who practise it?

How many even in Paris, with the exception of the closet philosophers, know of the creation and existence of the social museum of which I speak above? And yet a foundation of this kind ought to be announced and cried from the house-top, in the quarters of the rich and in the faubourgs—in the faubourgs especially, whence always comes the noise of which I spoke just now, but where many efforts are unknown, many results unsuspected.

In a communication made at Lyons, in August, 1894, to the Eighth Congress of the Sociétés Coöperatives de Consommation, M. Cheysson, vice-president of the Société du Musée Social, declared the aim which the Comte de Chambrun proposed to himself in founding this social museum, and assuring to it ample means of existence. First, What is a social museum? M. Cheysson said that, "Like the other sciences of mutuality, coöperation and prevoyance, social science, in a word, cannot do without an organization, which at once secures its popularization, its progress, and amongst other things chairs and laboratories." Chairs of social economy already exist. There is one at the Conservatoire des Arts et Métiers, one at the Faculté des Lettres de Paris, and a third at the École des Sciences Politiques. In addition to these official chairs, courses and conferences were organized some time ago by the Société d'Economie Sociale, but up to the present time there was no laboratory—that is to say no museum or permanent exhibit of social economy. Although a place was reserved at the Exhibition of 1867 for the study of questions which might ameliorate the physical and moral condition of the public, it was particularly in 1889 that these matters were accorded the importance which they deserved, which, I would even say, they demanded as their proper right. To interest visitors who rebelled at examining dockets, pamphlets, statistics and administrative documents, they put under their eyes drawings, graphic tables and models in relief, and the crowd then dared to penetrate into this pavilion, which after all was not so very repulsive of aspect. Workmen let themselves be seduced by these works, which proved to them better than words that people were taking interest in them. The result was morally instructive; and all the following exhibitions since that time have reserved an important space for social economy, and M. Picard, organizer of the Exhibition of 1900, has added to social economy, hygiene and public assistance—an important group in a general classification. But after the exhibition, what is going to become of these documents, whose gathering has been so useful, so precious? It was this that aroused the idea of a permanent museum of social economy—an idea which the Government took

into consideration. The exhibitors in 1889 generously abandoned in favor of this foundation the documents they had exhibited, and after many difficulties and delays, an act was passed for the creation of a social museum at the Conservatoire des Arts et Métiers. This museum has existed for about a year, and contains a certain part of the documents exhibited at Chicago and at Lyons, but it is quite small, very technical and its most important portion is consecrated to measures preventive of accidents due to machinery. This museum is rather a complement to the course in social economy which is carried on at the Conservatoire des Arts et Métiers.

Somewhat different is the social museum founded by M. le Comte de Chambrun, recognized as of utility on August 31, 1894, and inaugurated March 25, 1895, at 5 Rue Las Cases, in a *hôtel* especially arranged through the care of the founder. The twenty articles of the statutes clearly describe the aim of the Musée Social; and I cannot do better than quote some of them:

**Article I.** La Société du Musée Social has for its end the placing gratuitously at the disposal of the public, together with information and advice, the documents, models, plans, laws and so forth, of social institution and organizations, which have for object and result the amelioration of the material and moral situation of the laboring classes. It excludes all political and religious discussions.

**Article II.** The principal means of action which the Society proposes to employ are:

1. A permanent exhibition of social economy.
2. A library and work-room, free to all.
3. The communication, to those who are interested, of all the information which can be demanded by them on the subject of social labor.
4. Technical consultations, whether on the planning of works about to be created, or upon the condition of existing works and the modifications which the situation admits of.
5. The organization of conferences, lecture-courses and oral demonstrations, having for their aim to comment on the documents exhibited and to popularize the institutions of social economy.
6. The sending of commissions of study and investigation to different parts of France and foreign countries.
7. The issue of publications serving to make known the works of the societies and the documents collected by them.
8. The awarding of prizes and medals to the most remarkable works, and an organization of competitions upon special subjects.

As we see, this social museum, whose future is absolutely assured by a capital of 200,000 francs, increased by a building site given by the Comte de Chambrun, and representing a value of a million and a half francs, will make easy for all the practical study of social questions, and will bring into full light the applied solutions and whatever experiments are made.

The documents of the museum are classed in the following manner: 1st, social statistics and general documents; 2d, the government of the family; 3d, the government of property; 4th, the government of labor; 5th, the normal period of life for workmen [labor, savings and credit, habitation, food, clothing, etc.; recreation, clubs, etc.]; 6th, the critical periods of a laborer's life [loss of work, sickness, accident, old age, invalidism, premature death, and so on]. We see that the programme which the museum lays down for itself embraces all branches of social economy, and, according to the expression of M. Scheysson, is truly a "laboratory" for the study of this science.

Two important questions are the subject of two primary competitions, open to everybody, to Frenchman and foreigner alike. The first concerns "participation in benefits," for which the competitors will have to study the present conditions, their origin, antecedents and history, and also their after-development and future. To the study of the basic principles of the contract of participation in benefits can be joined the study of the means by which this mode of remuneration may be propagated throughout the world of labor. The second question offered for competition relates to workmen's associations, information concerning which, their results and the services they render, the competitors will have to seek. These two competitions, of which the importance can easily be judged, since they address themselves to the whole world, will give an opportunity for the offering of a prize of 25,000 francs each, and will close, the first on the 31st day of December, 1896, and the second on the 31st day of December, 1897. The duration of these competitions and the great value of the prizes show sufficiently that the Musée Social expects on the part of the competitors serious and useful study.

During the eight months since the Musée Social has been opened, many serious-minded men have come thither, but the working element still ignore it too much. It is a movement which will take place progressively, and which can only be encouraged by the societies of public utility, coöperative societies and workmen's associations. In any case, the existence of the museum is known to them, and all coöperators should be interested in it to the highest degree. Now, at the present moment, there are in France about 1,200 coöperative societies, and workmen's associations number about 120. The total amount of their annual operations can be set at twenty million francs. The foundation of this Musée Social can only accelerate the march of the coöperative movement, and in a very general way that of progress. It may be a centre for studies and instruction for everything which is connected with social questions, and as these questions interest the whole world, it cannot be useless to make it known in America, the country of liberty and progress.





## T-SQUARE CLUB, PHILADELPHIA.

ON December 18 the third regular meeting of the season was held. The Secretary announced that notice had been received from the Secretary of the St. Louis Architectural Club, stating that the T-Square Club had won the Inter-Club Medal offered by them for the best six First-mention drawings submitted by a representative architectural club. The announcement was received with great satisfaction, and it was resolved to communicate with the St. Louis Club, thanking them for their courtesy and assuring them of our desire to reciprocate by any interchange of civilities, professional or social, that might arise in the future as a result of a much-to-be-desired intimacy.

The T-Square Club was represented by drawings submitted by A. C. Munoz, Wm. Chas. Hays, C. O. Provost and Albert Kelsey.

Under the head of new business, Mr. Palmeter was asked to take the chair. Mr. Kelsey then brought up the subject of the recent Art Museum competition, and deplored the undignified way in which the result had been received by certain competitors—not members of the Club. He proposed that, in view of the discourteous newspaper agitation which had arisen, as a result of the protests of these competitors, that the T-Square Club pass a Resolution endorsing the experts' decision—remarking that the thirteen T-Square Club competitors had shown no bad feeling in the matter.

After much discussion it was moved that such a resolution be prepared by the Executive Committee, and be mailed to the Park Commission. The resolution was carried.

The resolution was prepared as follows:

PHILADELPHIA, PA., December 21, 1895.

TO THE COMMISSIONERS OF FAIRMOUNT PARK, PHILADELPHIA, PA.:—

Gentlemen, The appended resolution was adopted at a meeting of the T-Square Club, held December 18, 1895:

Whereas, Certain Philadelphia architects, competitors in the recent competition for the Art Museum to be built in Fairmount Park, and several daily newspapers having severely criticised the Report of the Board of Experts and having thereby cast unwarranted reflections upon the integrity of its members, therefore, be it

Resolved, That the T-Square Club, in the interests of good architecture, is of the opinion that the decision of the Board of Experts should be upheld without question.

Signed: ALBERT KELSEY, *President*,  
WALTER COPE,  
EDGAR V. SEELER,  
LOUIS C. HICKMAN,  
WILLIAM L. PRICE,  
DAVID K. BOYD, *Treasurer*,  
ADIN B. LACEY, *Secretary*.  
*Executive Committee.*

The evening's competition was the designing of an "Alteration and Addition to a City House." Although a very practical subject, it was well contested. Horace Burrell won First Mention; Chester Kirk, Second; Adin B. Lacey, Third.

Messrs. Bissell and Valentine also had creditable designs.

Mr. William L. Price lectured to the Club on December 4th on "Domestic Architecture." It was the occasion of quite a debate.

ADIN B. LACEY, *Secretary*.

## SOCIETY OF BEAUX-ARTS ARCHITECTS.

The following resolution was adopted at the annual meeting of the Society of Beaux-Arts Architects, held in New York City, on November 25, 1895:

The members of the Society of Beaux-Arts Architects, sympathizing in a common loss, express their sorrow at the death of Richard Morris Hunt.

For many years the most eminent of American architects, he was a constant example of artistic conscientiousness and enthusiasm, and of a generous and high-minded conduct in all his relations, that endeared him to all who knew him.

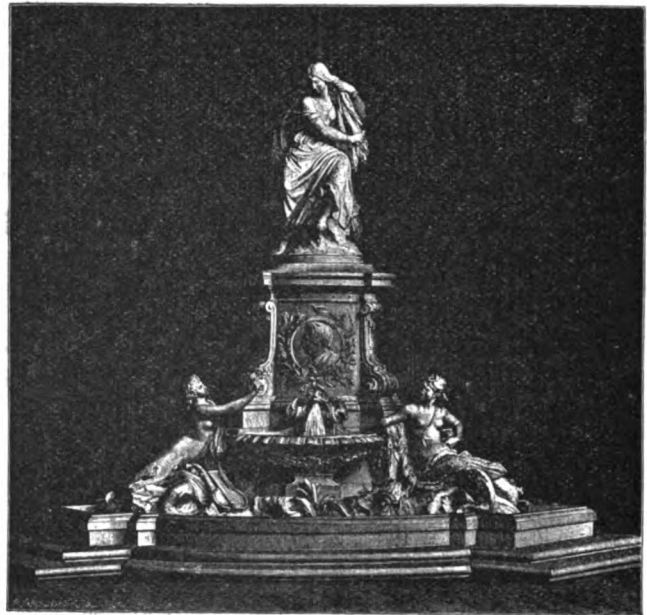
We can add nothing to what others have said as to his great gifts. Those are indeed fortunate, whose works, like his, are their best monument. But as members of the last society to which he gave the aid of his name and his counsel, we feel that to us his death was a peculiarly personal loss. Bound together, as we were, by a common affection for our Alma Mater, the School of Fine Arts, he was to us not alone the honored master, but the elder comrade and friend.

His life was rounded and complete. His character and his example are his priceless legacy to his family and to the profession he loved. His memory will be our greatest consolation for his loss.

THE "GOOSE AND GRIDIRON," LONDON.—The Goose and Gridiron, said to be the oldest tavern in the City of London, has been pulled down. The tavern was situated in a narrow alley almost in front of the steps of St. Paul's Cathedral, and was in a fairly sound state of preservation. It is recorded that Sir Christopher Wren, the famous architect, stayed at the tavern while St. Paul's was being erected.—*N. Y. Evening Post.*

## THE HEINE MEMORIAL FOUNTAIN.

THE annexed cut will serve to indicate the character of the fountain which the German Societies of New York recently desired to have that city accept and erect on some conspicuous site.



Fountain in Honor of the Poet Heinrich Heine offered to the City of New York after its Rejection by the City of Dusseldorf. Ernst Herter, Sculptor.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE MUSEUM OF FINE-ARTS, ST. LOUIS, MO. MESSRS. PEABODY & STRAENS, ARCHITECTS, BOSTON, MASS.

[Gelatine Print issued with the International and Imperial Editions only.]

SOLDIERS' ORPHANS' HOME, ATCHISON, KAS. MR. J. C. HOLLAND, STATE ARCHITECT, TOPEKA, KAS.

GATEWAY TO THE UNIVERSITY, HUY, BELGIUM. SKETCHED BY MR. W. W. BOSWORTH, ARCHITECT, NEW YORK, N. Y.

GOLF AND COUNTRY CLUB-HOUSE, RIDGEFIELD, CONN. MR. W. A. BATES, ARCHITECT, NEW YORK, N. Y.

INTERIOR IN THE APARTMENT OF BELA KRISZTINKOVICH, ARCHITECT, BUDA-PESTH, HUNGARY.

The following note will add interest to the illustration:—

BUDA-PESTH, September 24, 1895.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—As a punctual subscriber of the *American Architect*, I come most respectfully to you with a request to put a part of the arrangement of my lodging, which is acknowledged to be very tastefully arranged, in your journal.

Of this part of my lodging I take the liberty to give the following description:

In my travelling abroad as well as in America I collected the models of the most celebrated sculptures and monuments in faithful and artistic execution. And I also succeeded with great trouble and expense in gathering a matchless collection of miniature sculptures in its line; in which gallery there are represented all the artistic works of the antique Grecian and Roman sculptors, and of the present time the artistical works of the modern artists—nearly all the sculptures and reliefs of Thorwaldsen.

They are not arranged as a museum, but only serve (as the drawing itself shows) to ornament my lodging in every imaginable order, and on different pieces of furniture.

For this purpose the sofa with ornament and stands were directly made after my own design and project, on which stands a part of antique and modern statues are to be seen.

Before this sofa, on a little table there is my favorite reading, the last number of the *American Architect* with a bound annual set.

On the sofa there is thrown a genuine Persian carpet. The whole arrangement as a private interior is respectable and instructive for architects.

Hoping you will publish this in your journal, I am, dear sir,

Yours truly, BELA KRISZTINKOVICH, *Architect*.

HOUSE AND STABLE OF A. N. BELDING, ESQ., ROCKVILLE, CONN. MR. S. J. BROWN, ARCHITECT, BOSTON, MASS.

MANTELS IN THE SAME HOUSE.

## [Additional Illustrations in the International Edition.]

ENTRANCE TO THE NEWBERRY LIBRARY, CHICAGO, ILL. MR. HENRY IVES COBB, ARCHITECT, CHICAGO, ILL.

[Gelatine Print.]

DETAIL OF WESTERN PORTAL OF CHARTRES CATHEDRAL.

[Copper-plate Etching.]

INTERIOR OF BOLTON BANK, BOLTON, ENG. THE LATE MR. G. WOODHOUSE AND MESSRS. BRADSHAW & GASS, ARCHITECTS.

STAIRCASE: WHITEHALL COURT, VICTORIA EMBANKMENT, LONDON, ENG. MESSRS. ARCHER & GREEN, ARCHITECTS.

[The following named illustrations may be found by reference to our advertising pages.]

HOUSE ON CHAUSSÉE D'ANVERS, MONT ST. AMAND-LEZ-GAND, BELGIUM. M. MODESTE DE NOYETTE, ARCHITECT.

DETAILS OF TWO OLD DOORWAYS, BOSTON, MASS. MEASURED AND DRAWN BY EUGENE L. CURRIER.

DETAILS OF COLONIAL STAIRCASES.

CITY HOUSES: THE SKIPPER'S HOUSE, GHENT; THE WEAVER'S HOUSE, GHENT; HOUSE ON AVENUE WAGRAM, PARIS.



BOSTON, MASS.—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895:* at the Jordan Art Gallery, 450 Washington St.

CHICAGO, ILL.—*Paintings by Robert W. Vonnoh, also Tapestries lent by Charles M. Ffoulke:* at the Art Institute, until January 15.

MINNEAPOLIS, MINN.—*Exhibition of Posters:* at the Studio Club, 719 Hennepin Ave., January 6 to 15.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Fourteenth Autumn Exhibition of the National Academy of Design:* December 23 to January 11.

PHILADELPHIA, PA.—*Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts:* opens December 23, closes February 22. The Architectural Section of the Exhibition closes February 1.



STEALING GILDED RAILINGS IN PARIS.—Numerous Parisian monuments are surrounded by rails of wrought-iron, and these, as a rule, are gilded over. The quantity of the precious metal utilized is so infinitely small that one can hardly imagine that it would be worth anybody's while to take the trouble to smash and carry away these rails, and yet for several weeks past they have systematically disappeared. Last night the police surprised a gang of robbers at work on the fence of the Jardin du Luxembourg, but so clumsily did the officers go to work that all the criminals escaped with one exception, and he vigorously protests that he knows nothing of the gang and was only a passer-by.—*Galvani Messenger.*

WOOD-PRESERVING IN SWITZERLAND.—A simple, effective and cheap way of preserving wood from decay is practised in Switzerland in the preparation of posts for the telegraph service. A square tank, having a capacity of some two hundred gallons, is supported at a height of twenty feet or twenty-five feet above the ground by means of a light skeleton tower built of wood. A pipe drops from the bottom of the tank to within thirty inches of the ground, where it is connected with a cluster of flexible branches, each ending with a cap having an orifice in the centre. Each cap is clamped on to the larger end of a pole in such a manner that no liquid can escape from the pipe except by passing into the wood. The poles are arranged parallel with one another, sloping downwards, and troughs run under both ends to catch drippings. When all is ready, a solution of sulphate of copper, which has been prepared in the tank, is allowed to descend the pipe. The pressure produced by the fall is sufficient to drive the solution, gradually of course, right through the poles from end to end. When the operation is ended, and the posts dried, the whole of the fibre of the wood remains permeated with the preserving chemical.—*London Work.*

A MERITED REBUKE TO AMERICANISM.—“For colossal gall and impudence, Mrs. Elizabeth Garrison, of Chicago, takes the bun. She asked Sir Mackenzie Bowell yesterday to grant permission for the erection at Quebec of a monument to Colonel Montgomery, who fell on December 31, 1775, when leading a party of Yankee troops in an attempt to capture the ancient capital of Canada. The First Minister received his visitor courteously, but is said not to have held out any hope that the request would be granted. He promised to lay it before his colleagues. Canadians, in his judgment, would regard it as a most extraordinary thing if the Government approved of the erection of a monument in this country to the memory of a man who had invaded Canada and sought to subdue it. Did the lady suppose for a moment that permission would be given to Canadians to erect a monument to Brock in Detroit, to commemorate his capture of that city in 1812? Mrs. Garrison evaded this question, but ventured to remark that a monument to Montgomery in Quebec would be an indication of close union between Anglo-Saxon people. She reminded the Premier that the precedent existed in case of a monument in Quebec to Montcalm. It is a good many years since the Premier went to school, but his knowledge of history was equally as good as the Chicago lady's. He reminded Mrs. Garrison that the monument at Quebec was a joint one to Wolfe and Montcalm, typical of union between the two nationalities, English and French. He was glad to inform Mrs. Garrison that this union still existed, and was strengthening every year, and that English-speaking and French-speaking Canadians were living on friendly terms with each other as British subjects. Montcalm and Montgomery could not be mentioned in the same breath, one being engaged in defending his country, the other being a foreign invader. Mrs. Garrison was evidently depressed at her want of success, and will, doubtless, return to Chicago and write columns of spreadeagleism and condemnation of the pigheadedness of the Canadian Premier.”—*Ottawa Dispatch to the Halifax Herald.*

ABSURDITIES IN STAGE-SETTINGS.—Prof. Herkomer, R. A., recently delivered an address at the Institute of British Architects on “Scenic Art.” Criticising the modern theatre, he said some new form of auditorium, with an entirely different arrangement of the seats, was badly needed, and this, he thought, could be done without too much space being taken up. The aim should be to provide seats from which the full work of both actor and scenic artist could be seen by the spectators. Some people thought scenic art was antagonistic to the drama, but he held a different opinion. The real secret of that art lay in illusion. The make-up of the background should be as carefully attended to as was the make-up of the actor; yet the audience, which howled down the slightest inconsistencies in the actor's portrait, took no notice of the inconsistencies in the scene. At present it was thought proper to have pieces of sky hanging in strips, like clothes on a line, and to have pieces of the firmament coming together at an angle in the corner of the stage. [Laughter.] It was strange that tradition stuck to the stage more than to any other form of art. Still, he would not destroy tradition in that direction. The present system, for footlights was bad in every way, and very inartistic. There was a strange commotion when candles had to give way to lamps, for the actors, who were not always such swells as they were to-day, regarded the stumps of the candles as their perquisites. The proscenium in all theatres was much too high, and, for many scenes, far too wide. He proposed a contracting proscenium, which would adapt itself to the particular scene which was being portrayed. He claimed for scenic art a position not inferior to any form of pictorial art, and in this connection condemned the inconsistency of flashing a “moonbeam” upon an actor at all points of the stage. He had known a case in which two actors of equal prominence were on the stage at the same time, and each had a “moonbeam.”—*London Standard.*

HOW THE FOUNDER OF THE VENDOME COLUMN WAS RUINED.—During the present century one of the most enormous monuments which have been attempted in bronze is the celebrated Vendôme Column. The French Government entered into a contract with an ironfounder who had never been engaged with either the modelling or casting of bronze; the Government engaged to supply him with the cannon which had been taken from the Russians and Austrians during the campaign of 1805 in quantity sufficient to found the monument. Knowing nothing of the phenomena which the fusion of bronze offers, he discovered when he had completed two-thirds of the column that he had used up all his metal. Enough bronze had been served out to him to complete the monument, and he was responsible for the full amount. Ruin stared him in the face. In order to get out of his difficulty he melted up his scoriæ and mixed the metal with some cheap refuse which he bought, and so managed to finish the founding. These castings were discovered to be full of flaws, and the work was stopped, to the utter destruction of the founder. The moulding of the different parts of the bas-relief was so ill-executed that the chisellers employed to repair the defects removed no less than seventy tons of bronze, which became their perquisite in addition to £12,000 paid for their labor.—*Illustrated Carpenter and Builder.*

A RECORD YEAR FOR PIG-IRON.—The production of pig-iron in 1895 has verified the predictions made early in the year that if the rate of output at the time was maintained for the year the record of tonnage would be exceeded. The total output, according to official figures compiled by the *American Manufacturer*, shows a production of 9,387,639 tons, exceeding 1890, the largest previous year, which had a tonnage of 9,202,703 tons. In 1892 the output was 9,157,000 tons. The tonnage of 1894 is exceeded by 730,251 tons. Unless Great Britain shall exceed any year's production the tonnage of the United States will far outstrip the British. Great Britain's heaviest year was 1892, when 8,589,680 tons was turned out, and in 1894 her production was only 7,364,745 tons. The enormous increase in pig-iron production of 1895, when the total tonnage was 4,044,525 tons, is less than half that of 1895.—*N. Y. Times.*

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ALAS, poor mother! When some three or four years ago Edward Stewardson was the victim of a boating accident at Newport, his mother must have felt that unkind fate could have no more poignant grief in store for her. It could not have been possible to imagine that another son, a noble one, respected, successful, able, a manly man in every sense, would a few years later leave her in the full vigor of health and middle age and be brought back the victim of a skating accident—perhaps of all forms of death the most coldly melancholy. Such an ending of a promising career is a shock even to those who knew John Stewardson only by name and reputation, while to the friends of his youth and early manhood, who studied with him at Harvard, which he left before graduation to enter the Atelier Pascal and the École des Beaux-Arts, and who travelled and sketched with him in the close companionship of student tours on the Continent, the news brings a real personal grief. In the small group of younger architects, who are doing so much for Philadelphia, there was no one who was more respected or more influential than John Stewardson, who, in the dusk of evening, on January 6, lost his life in the Schuylkill River, in his thirty-eighth year. His influence, which was a real one, was due not only to his ability as an artist, but to the force of his personal character which led him to take an active and unselfish part in all matters where the interest of architects or the wider weal of Philadelphia itself called for the exertion of a wise discretion. The character of the buildings designed by himself and his partner, Mr. Cope, was always good and of high average excellence, almost always correct and scholarly, showing little of the straining after personal peculiarities which is affected by some, and never containing a trace of the eccentricity which has made Philadelphia architecture a bye-word in the past. In addition to a large amount of interesting domestic and ecclesiastical work, the firm has designed some large buildings, perhaps the most interesting of which is the new dormitory group for the University of Pennsylvania. We feel that this is one of the most painful incidents that we have ever had to chronicle, and to make grief more grievous still, it is only needful to know that within a few days of his death he was to have been married. Alas! poor mother, and alas! poor bride—never to be!

MR. BENJAMIN BUCKNALL, who is known in this country as the translator of Viollet-le-Duc's books, died recently in Algiers, where he had resided for many years. Mr. Bucknall spent much of the earlier part of his professional

life in France, and formed a warm friendship for Viollet-le-Duc, whose constant companion he was during the restoration of the Château de Pierrefonds, and of whose smaller works he made excellent English translations. About the time of Viollet-le-Duc's death, Mr. Bucknall took a trip to Algiers for the benefit of his health, and was so much pleased with the climate that he established himself permanently there, and practised his profession with much success, not only the French and English residents, but some of the wealthy natives, availing themselves of his taste and skill.

IT is well known that the American Academy of Design, finding its building on the corner of Fourth Avenue and Twenty-third Street, New York, too small, and its site too valuable for business purposes, to make it desirable to retain its quarters there, has for some years contemplated removal, but a suitable site for a new building has not been easy to find. Now, as the Twenty-third Street property has been definitely sold, to the Metropolitan Life Insurance Company, a move must be made; and it is proposed that the Academy, either as a separate corporation or through the medium of some new and comprehensive body, including not only the Academy, but the Fine-Arts Society and the other artistic bodies which have, or need, a home of their own, should acquire land adjoining the building of the Fine-Arts Society, on Fifty-seventh and Fifty-eighth Streets, and erect a building, arranged in such a way that the galleries and other rooms of the Academy and the Fine-Arts Society might, to a certain extent, be used in common. This plan certainly has much to recommend it, for artistic bodies in this country have to struggle hard for existence, and the saving to both corporations of being able to use one another's rooms on occasion would be very considerable, while the public would be benefited by the opportunity which the joining of the two sets of galleries would give for holding exhibitions occasionally on a large scale. An annual New York Salon, open to all the world, would be an excellent thing for art in this country; and if the different organizations can work together, it would be quite possible to have it. Unfortunately, bodies of artists are not remarkable for their capacity for working together successfully. Those in New York have distinguished themselves, almost above all others, by the mutual consideration and public spirit which have rendered the Fine-Arts Society, the Sculpture Society, the Municipal Art Society and the Fine-Arts Federation possible; but the Academy has always had the reputation of being satisfied with its own dignity, and it will be interesting to see whether it will unbend enough to join the more popular movement.

PUBLIC opinion in New York appears to be taking definite form in opposition to allowing the erection of the enormously lofty buildings which have lately sprung up in such numbers in the lower part of the city. Not long ago, the Chamber of Commerce, a very influential body, appointed a committee to consider the subject, and accepted and approved a report which urged upon the Legislature the passage of laws restricting the height of buildings, and proposed a regulation, which is new to this country, by which buildings more than eighty feet high should not be allowed to occupy more than eighty per cent of the lot on which they stand. Tenement-houses in New York, under the present statutes, are not allowed to cover more than a certain percentage of the lot; and, as the Chamber of Commerce says, the high buildings do so much to shade the streets and darken the neighboring buildings, that they might with propriety be assimilated to tenement-houses in this respect.

THE London Architectural Association has introduced a new fashion, or rather, revived an old one, of having papers read, or practical lectures given, by working mechanics upon various details of building construction. To say nothing of the value, in cultivating amicable feeling between architects and mechanics, of friendly discussions upon matters in regard to which each knows something that the other does not, architects, especially young ones, have very much to learn from such discussions. In nearly all important building operations, the work of the various mechanics must be done to the satisfaction of some architect; yet he must be a very experienced architect indeed who can conscientiously say

that he knows just what sort of work in each trade ought to satisfy him; and young architects, at least, compelled to pass judgment on an infinite variety of work that they never saw done before, are often obliged to compare it with some ideal criterion of their own, which may be quite at variance with the standard of good work. The consequence is that their decisions are sometimes unduly harsh, or, perhaps more frequently, are far too favorable to the designing mechanics who perceive at once their ignorance of the subject, and lay their plans for taking advantage of it; while, in either case, a conscientious practitioner is oppressed by the feeling that he is doing wrong in assuming to know about matters which he really does not understand. Nevertheless, as the contract makes him the judge, it is his duty to exercise his functions as best he can; and, while it may be a comfort to him to know that his decision, if given in good faith, is binding on a contractor who has agreed to abide by it, even if it shows unfamiliarity with the subject, it is his legal, as well as moral, duty to avail himself of all reasonable opportunity for increasing his practical knowledge: and, next to getting materials, and doing building-work with his own hands, the best thing for this purpose is to watch experienced men do it, and listen to their explanations of the various steps.

**T**HE *British Architect* gives an interesting account of the discovery at Athens of the ancient Temple of Dionysos.

It will be remembered that Dr. Dörpfeld, basing his opinion on the actual present topography of the ground, rather than on the interpretations given by the learned to certain Greek texts, recently traced a line for the Sacred Way very different from that ordinarily laid down by the archaeologists, and, on excavating, found it where he expected; and he seems to have met with even greater success in divining the position of the Dionysos Temple. Nearly all archaeologists suppose that this must have been situated near the great Theatre of Dionysos, which still exists at the southeast of the Acropolis; but Dr. Dörpfeld, again, apparently relying on the actual topography, predicted that the temple, which was known to the ancients as the Temple in the Marshes, would be found on the west slope of the Acropolis hill. Excavations made under his direction have placed the correctness of his surmise beyond a doubt. On exploring the ground indicated by him, traces were found of a three-aisled hall, of Roman date. Such a building might be for any purpose, but an inscription was soon uncovered, containing the rules and by-laws of the Iobacchoi, evidently a religious association under the patronage of the god. Besides this, altars and votive reliefs were found, all showing their connection with the worship of Bacchus, or Dionysos. All these things indicated that the spot, although far from the great theatre, was sacred to Dionysos. Dr. Dörpfeld dug farther, and, more than twenty feet below the Roman hall, came to a triangular enclosure, walled-in by polygonal masonry, of the sort known to our youth as Pelasgic, or Cyclopean. At the corner of this enclosure was the foundation of a small temple, of very archaic type; and in the middle was the base of an altar, by the side of which were two deep slits, or mortises, evidently intended to hold an upright slab. What this was used for is indicated by a passage of Demosthenes, who says that, in his time, a slab was set up beside the altar of Dionysos, on which could be distinctly seen, inscribed in archaic letters, the sacred oath of the Gerairai, or maiden priestesses of Dionysos. He says, further, that the sacred enclosure was only opened once a year, on the twelfth day of the month Anthesterion, when the festival of the marriage of Dionysos was celebrated. As Dr. Dörpfeld predicted before the excavation was begun, no votive offerings were found in or about the ancient temple, it being obvious that a temple opened only once a year would not attract the ordinary crowd of worshippers. Within the enclosure was, however, found something of far greater interest, in the shape of the sacred wine-press of the god, consisting, so far as it remained perfect, of a raised floor, covered with hard cement, and laid with a considerable inclination toward a spout, under the outlet of which was placed a large earthen vessel. To this day wine-presses of exactly the same form and construction are in use in many a Greek village, so that there can be no doubt as to the identity of the consecrated spot around which was celebrated, from the very earliest time, the annual Flower and Wine festival of the Anthesteria, and in front of which, on the marshy ground where Aristophanes heard the frogs croak their witty chorus, were played the first

Greek dramas, ages before the theatre was built on the other side of the Acropolis.

**M.** HENRI MOISSAN recently exhibited at the French Academy of Sciences a piece of black stone, about as large as a man's fist, having exactly the appearance of a lump of slate, like those which occur abundantly in the neighborhood of Angers. This bit of rock, however, is valued at more than forty thousand dollars, being the largest black diamond ever found. It was picked up in Brazil, in the province of Bahia, by a miner, who was working on private grounds. It weighed three thousand carats or about twice as much as the largest stone of the kind hitherto discovered. Within a short time after its discovery, about five months ago, it lost nineteen grammes of its weight, evidently by the evaporation of water contained in it; but this loss has now ceased. Its crystalline form is nearly perfect, resembling that of the artificial black diamonds formed by the crystallization of carbon in silver crucibles. The Academy will have casts made of the stone, which must then be returned to the owner, to be broken up and sold; black diamonds, as every one knows, being in great demand for rock-drills, as they are even harder than the transparent stones. Under the Brazilian laws, the owner of the ground in which it was found will receive one-fourth of the price, and the person finding it the remainder, out of which, however, he must pay certain taxes to the Government.

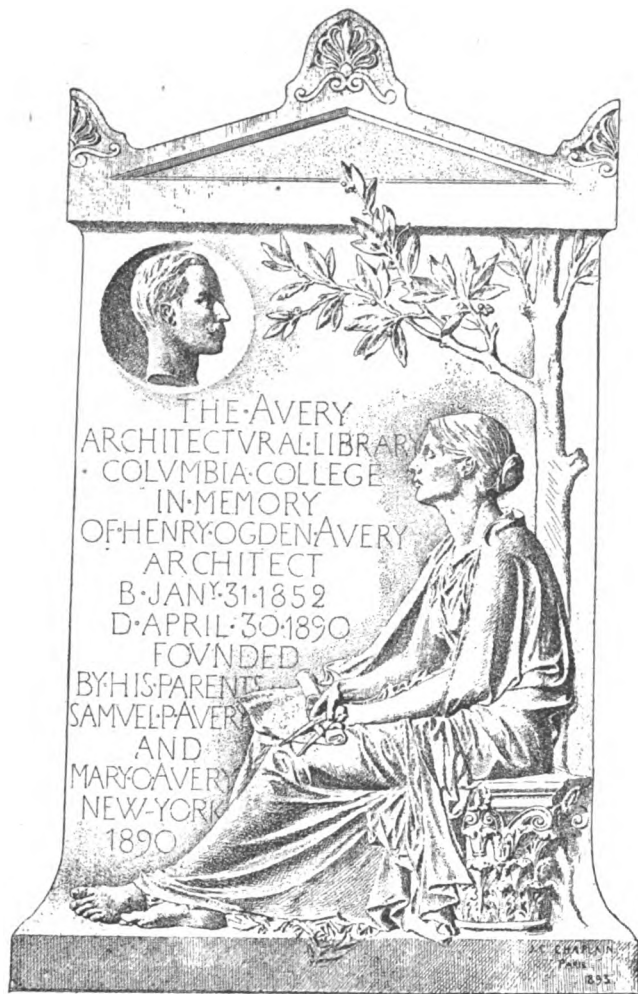
**E**VERY one may not know that an electric trolley-railway, two miles long, is now in operation in Rome, connecting the railway station with the opposite quarter of the town. Power is obtained from the cascade of Tivoli, twenty miles away, in the Sabine hills, the same current furnishing electric-light to the city. As the current from the Tivoli turbines is alternating, and is transmitted across the Campagna at a very high pressure, it is necessary to reduce the pressure, and transform the current into a direct one, before it can be used in the car-motors. This transformation is accomplished by motor-dynamos, which are driven by the alternating current, and produce a direct current at the required tension.

**T**HE French Court of Appeals has rendered an interesting decision on the point of what constitutes justification for delay on the part of a contractor. B, a builder, was engaged by A to do certain work for him "with celerity." B seems to have thought that he was entitled to be his own judge as to what was proper celerity, and stopped work for a time on A's buildings, to attend to matters of more interest to himself. After the buildings were done, A brought suit to recover damages for the loss that he had suffered from the delay; but the Court of first instance decided against him, apparently on the ground that there was no proper standard for judging what degree of celerity was required by the contract. On appeal, the highest court reversed this judgment, laying down the rule governing such cases as follows: "A contractor who has agreed to build with celerity ought not to interrupt the works unless 'force majeure' has made it impossible to continue them. He violates his agreement if he suspends the works at a time when the contractors for neighboring buildings continue to carry on the constructions which have been entrusted to them by the same proprietor."

**T**HE swiftest naval vessel, and probably the swiftest vessel of any kind, in the world, has just been built, according to the *Revue Industrielle*, in France. This extraordinary ship is a sea-going torpedo-boat, constructed at Havre, by the house of Augustin Normand. The contract required that it should maintain a speed of from twenty-nine to thirty knots for an hour, under full steam. At its trial trip, this little vessel, the "*Forban*," ran more than thirty-one knots in an hour. This is equivalent to about thirty-five miles, probably the greatest distance ever covered by a sea-going ship in sixty minutes. Naturally, powerful engines are required to drive the craft through the water at such a rate. Although the displacement of the vessel is only one hundred and thirty-five metric tons, or about one hundred and fifty of our tons, it carries engines of thirty-two hundred and fifty horse-power. One wonders a little how long the supply of coal that could be carried in such a hull would furnish steam for such engines; but, of course, torpedo-boats are only expected to display their speed on special occasions.



## THE AVERY MEMORIAL LIBRARY.



Bronze Memorial Tablet in Columbia College Library.

**H**ENRY OGDEN AVERY, Architect, of New York, is having created in his memory one of the enduring monuments of this country, in the form of the "Avery Memorial Library."

In America, to-day, there are few institutions having complete collections of art books, especially on architecture and the allied arts. The universities have not begun such collections until quite recently. Harvard has started an architectural library for use in its course in the Scientific School. The Boston Museum of Fine Arts and the Institute of Technology have fair collections. Probably the best collection is in the Boston Public Library. The reasons for this scarcity are to be found in the great cost of books of this kind, and the lack of general attention and cultivation which so commonly prevails, outside of the profession and some connoisseurs. During the last few years there seems to have been a slight revival of interest in matters of taste on the part of the people, so that the librarians of many of our public libraries have felt the necessity of placing before the people as many illustrated architectural and art books as the means and the scope of their institutions would allow. Still, not until the last few years was there any great collection to which a seeker could turn, with the assurance of finding a fertile field for his artistic investigation.

A visit to this immense collection, which was started in June, 1890, by the founding, at Columbia College, of the Avery Memorial Library, by Samuel P. Avery and Mary O. Avery, his wife, father and mother of Henry O. Avery, will show what an important event then transpired in the art history of this country.

A short résumé of this young architect's life will not be out of place. Born in 1852, and from this moment surrounded by an artistic atmosphere, for Mr. S. P. Avery is one of the earliest and best-known picture-dealers in this country, his tendency was from the first naturally toward art; and so he turned easily to the study of architecture which he made his life's work. After studying for a time in the Cooper Union classes, he entered the office of Mr. Russell Sturgis, then a practising architect in New York, in the year 1870. Two years later he went to Paris, and entered the *École des Beaux-Arts*, where he studied with pleasure and profit from 1872 to 1879, enjoying these few brief years with all the zest known to a lover of art, a young enthusiast in his work, in that incomparable atmosphere of Paris. On his return to New York, he entered the office of Richard M. Hunt, where he worked until 1883, when he started in the independent practice of his profession. It will be noted that he spent thirteen years of his short life in preparing for that work, which, had life been spared him, would have been fruitful,

no doubt, in good results, which come only by patient education. While in Mr. Hunt's office, he worked on many of the buildings emanating from that office and well known to all. He was an active member of the Architectural League, and the Archaeological Institute of America, and did considerable literary work, on topics pertaining to the fine arts, among them an article in *Scribner's Magazine* on the *École des Beaux-Arts* of Paris.

Of regret over his sad death at the beginning of his career it would be difficult to give adequate expression, as well as of the sorrow felt in his profession, and in the organizations of which he was always an active worker, intelligent and peculiarly unselfish. As a fitting memorial to this son, Mr. and Mrs. Avery gave his books to Columbia College, to found a library of architecture and the allied arts, and also a sum of money to be used for the immediate purchase of books, also creating a fund for the maintenance and growth of the library, and a committee was formed to perform these services. This committee consisted of the librarian of Columbia College, Mr. George H. Baker, Mr. Russell Sturgis, of New York City, and William R. Ware, Professor of Architecture in Columbia College, and so wisely and faithfully have they discharged their pleasant duty, that its success is assured. Since then, the work of adding to the Library has gone on without interruption, the Committee buying, with Mr. Avery's fund, such books as in their judgment are suited for the purpose. The original sum given by Mr. Avery, long since exhausted, has been supplemented by additional amounts from the same source, and he has authorized large purchases at home and abroad, and so the collection has grown to remarkable proportions. It now numbers about 13,000 volumes of the best art books in existence, and is rich not alone in the field of architecture and building, but of all arts to which the architect, the art-lover, the designer in all fields, the student and the intelligent public can turn with pleasure and profit. It is not a collection of books every architect ought, or need have. It is a collection from which historical questions can be studied by the student, the architect, the critic, or the general public. The development of any building movement in any definite region can here be traced, its growth followed, its decadence and decay noted. It is an historical library, rich in archaeological works on architecture, sculpture, painting, and all other arts. If a furniture-designer, for example, has to design a piece in the style of a certain date and period of art, he can get his data from this library: or an architect can learn that a Classic building looks better and more refined and scholarly with Classic detail. He will not taper his Romanesque shafts and put Gothic foliage on Renaissance columns, or design a cathedral in the spirit of Gothic wisdom, using Romanesque arches, with Norman detail, and have his chancel decorations in rococo — or Moresque, so called. With some study, Neo-Grec, Norman, Italian, Gothic, Persian and Arabic, will not be worked in on an innocent and unsuspecting public, all on the same building.

It is not a collection of scarce books to delight a bibliophile, or of scarce and unique prints, but rather a library for the investigator and the student, as well as the professional man. The oldest book in the collection is perhaps the beginning of the modern literature of the architect, — "*De re ædificatoria*," by Alberti, published in Florence in 1485. There are treatises on the architecture of Vitruvius, Vignola and Alberti, down to thousands of books and pamphlets of our own day. Among the authors are Serlio, the Scamozzi, Schübler, Viollet-le-Duc, Rondelet, Canina, De Quincey, Palladio, Gwilt, Paranesi, Delorme, Inigo Jones, Tatham, Blondel, Daly, Decker, Du Cerceau, Didron, Adams, Britton, Gibbs and Pugin. So it will be seen that here are also many rare, curious and artistic engravings, prints from famous hands and many fine collections of drawings and designs. The investigators in all fields of work, of the Orient as well as in Europe, are here gathered. The Classic, the Oriental, the modern European styles — the Gothic and its various revivals, the Romanesque of Germany, France and Italy, the Renaissance of all styles and periods. Ecclesiastical, public, civic and monumental, domestic and military; schools, colleges, hospitals; the mansion of the prince in stately palace, villa or château, or the home of the humble peasant of all times and countries. For those interested in the literary or biographical part there are collections of biographies; accounts of the lives and times of the great architects and of all workers and leaders in art revivals.

There are many monographs of important buildings. Sometimes a pamphlet of a few pages on a small palace or a famous château, up to huge series of volumes on the greatness of Rome or Venice — like Letarouilly, for example. There is the "*Voyages dans l'Ancienne France*" in twenty splendid folio volumes, with about three thousand full-page plates, with illustrations in the text, all from drawings on stone, — a monumental work depicting many buildings, châteaux, abbeys, cathedrals, houses and churches, some of which have long since been swept away by the march of improvement. Again, take the twenty-four glorious volumes of Piranesi — a pleasure alone to handle, with their rich heavy antique bindings and covered with the subtle dust the book-worm loves, like the bloom on the peach — and examine the plates. They are the most splendidly rich engravings ever executed, not the thin liny creations of our times, but rich, corpulent, with that richness which John Sell Cotman in England often approached in his drawings. These are creations of some hundreds of years ago, and their equal will probably never again be produced. Of course, such drawings are not as accurate or reliable as photographs would be, but there are here depicted

many things long since passed away, and the stimulus to the imagination from the contemplation of these engravings cannot, of course, be equalled by the best photograph ever made. The earlier methods of illustration depended much on the hand of the sketcher and his reproducer, first on wood, later on stone, until in our time it would seem that the era of cheap methods of illustrations has culminated. When lithography was invented, new fields of illustrations were opened up; so that from 1825, till twenty-five years later, there were published a large number of expensive architectural works with illustrations from stone, mostly by Frenchmen. After this came the photograph, the photogravure, the heliotype, the half-tone, the zinc plate, and numerous similar processes which revolutionized the art of illustration, cheapening it, and consequently increasing its circulation. Above all, entire accuracy was assured by photography. In these later processes, one finds the desirable accuracy of detail in all its completeness which has become so necessary to-day to the architect. The most pretentious work in this library produced by these later photographic processes and by chromo-lithography is, perhaps, "*The Basilica of San Marco at Venice*," published by Ferdinand Ongania. Included in it are hundreds of photographs of detail of all parts of this grand Duomo, from the "white foam" of the cresting of the façade, and the finials on the domes, the mosaic waves on the floors, down to the deepest crypts, in detail and in mass. The art of chromo-lithography has rendered it possible to reproduce the elaborate mosaics, marbles, gold, metals and jewels, all in color fac-simile, in the most faithful manner. There are, besides, elaborate monographs on particular buildings by the thousand, plans and details of nearly every building of any importance in Europe which is likely at all to interest the architect or the student. There are monographs of Orvieto, Milan, Chartres, and other important cathedrals, with many different views and hundreds of plans.

The art of construction has advanced so rapidly in this country, that the older books are of comparatively little value. But this library aims to keep up with this advance, and furnishes books on construction in all its intricate details, as well as books on heating, lighting and ventilation.

There are numerous purely technical works on design, architectural drawing and perspective. There is a large collection of books on decoration in all its phases and applications, consisting of photographic reproductions from the works of the older masters of ornament, from rare works and from executed parts of buildings, and examples of the work of the modern masters; works of wrought-iron, bronze, wood-carving, fresco-painting, cast-iron, glass staining and painting, furniture, and hundreds of magnificent works on tapestry, textile fabrics, pottery, glass, arms and armor, and, in fact, all of the industrial arts. Among the works on furniture are splendidly bound volumes by Chippendale, the brothers Adam, Johnson, of the English, and Percier and Fontaine, David, Buhl and others of the French masters. In the field of ceramics, there are representatives from all times and nations, including the more rare and valuable works on the glass and pottery of Greece and Rome.

Of interest to the book-lover pure and simple, are many beautifully bound books, some with "extra" illustrations, specimens of early engraving and wood-cuts, book-printers' marks and plates, books with annotations by former owners, sometimes with the autograph of a former famous owner. There are, too, a few collections of original drawings and designs.

Besides his professional library there is a collection of drawings, original designs, sketches, etc., in portfolios and scrap-books, and some five hundred photographs, all collected or executed by the late Mr. Avery.

Sculpture plays an important part in architecture to-day and we find it considered here from both an archaeological and artistic standpoint, from the earliest Greek times to the most desirable modern examples. In fact, included in this library, every fine art is exhaustively represented, except perhaps painting and music. There are also most of the greater art journals and general works on the history and development of art. There are many illustrated catalogues of art collections which have been sold during the last twenty-five years: the catalogue of the Spitzer collection, in six magnificently illustrated volumes, forms part of this collection.

There is a large collection of works on archaeology, embracing all of the greater periodicals and works on Classical and Oriental archaeology, while on that of Western Europe, including France and England, there are hundreds of volumes, besides the printed proceedings of the societies devoted to this study. There are also a number of English county-histories.

The benefits arising from the study of a collection of books like this cannot be estimated. To while away a leisure hour in examining the books which strongest appeal to his tastes will unquestionably improve the quality of any artist's work. A busy professional man or his assistant draughtsmen cannot always stop and hunt through his library for what he wants. He should have absorbed those things which he will need, so that they will come to him almost without effort. He should no more hesitate for an idea than a speaker for a word, or a musician over what key to touch. This library is the place to "absorb."

To the student who contemplates a trip abroad, there is perhaps no better assistance than to become familiar with the buildings, etc., from these books, so that he will know when and where to look for that which he desires to see. For in late years the brightest gems in Europe have to be sought for with care, and one must know his

history and the geography of architecture well to get all the benefits of a foreign tour; besides, to be able to greet the great works of art and architecture abroad as familiar friends is one of the greatest pleasures of such a trip. He can then, for instance, get off the train at San Gimignano and compare his bookish impressions with those new revelations. He will need no introduction to the Valley of the Loire, to the mansions of eighteenth-century England and the palaces of Rome. He will be full of the language of his art, which will aid him in expressing himself in brick and stone, and will remain untortured by visions of a "new style," because he knows and is content with the beauties of the greatest masters of all time. He will see other beauties in architecture besides the modern school of France, other teaching besides that of the beloved and all-sufficient "*atelier*" or the "*Beaux-Arts*" of Paris.

There has just been issued from the DeVinne press a catalogue of this library, consisting of eleven hundred and thirty-nine beautifully printed pages, splendidly bound—in itself a sumptuous volume, larger than the directory of a metropolitan city. It contains, as a frontispiece, an etching by Toussaint, from the bronze memorial panel in the library, modelled by Chaplain, of Paris, a reproduction of which memorial accompanies this article. There also graces the library an appropriately inscribed bronze tablet, erected by Mr. Avery's associates of the Architectural League of New York, and a stained-glass window made and presented by the late Daniel Cottier. For the purpose of widely diffusing the knowledge of the existence of this library and its contents, an edition of one thousand copies of this sumptuous catalogue has been printed and will be distributed to the leading colleges, libraries and art institutions, and a few to the press.

The library, which is fully "card-catalogued," is now well arranged in one room apart from the general library of Columbia College, and best of all, in charge of an assistant librarian who has made himself familiar with the books—a great aid to those wishing to consult any special line, which those who have spent so many fruitless hours waiting in libraries will appreciate.

In the new Columbia College library building now being erected, the eastern arm of the ground-plan has been assigned as a permanent home for this vast collection.

This imperfect account will show how much has been accomplished in a few short years. The work is by no means complete; it is continually going on, supplemented by gifts and money from Mr. Avery, and books from friends and admirers of his son. Above all, is the profession indebted to the mature taste and judgment of Mr. Avery, and the library commission. This library, founded by one of New York's most liberal-minded lovers of the fine arts, is a great and growing field for education for every one. It is not alone for the use of the college which gives it shelter, but for all who are engaged in the practice or study of the fine arts.

J. A. SCHWEINFURTH.

#### NEW OPERA-HOUSE FOR LONDON.

SOME few years ago Her Majesty's Theatre and Opera-house in the Haymarket, London, was sold as old building-materials and for weeks the house-breakers were to be seen pulling down a structure which was one worthy of the metropolis. This opera-house compared favorably with those of Covent Garden and Drury Lane. Its construction was good. Its planning, although not up to the standard expected now, was far in advance of the majority of the London theatres of the same date. Walls of enormous thickness were exposed to the view of the passers-by in the Haymarket during the period of demolition. Iron girders, iron columns, iron doors, fireproof floors, all denoted that the structure was one almost in advance of the age in which it was erected.

Yet this opera-house had to be pulled down because no manager could "make it pay." London, by keeping away from Her Majesty's, declared that it did not require more than one opera, that of Sir Augustus Harris, at Covent Garden.

When "Her Majesty's" disappeared, one of the finest building sites in the most fashionable quarters of London was cleared, and everybody expected within a short time to see an army of workmen erecting some huge hotel or blocks of residential flats. Scheme after scheme was discussed, while months rolled by and yet nothing was done with the site. One then began to hear murmurs of complaint of the unsightliness of the hoardings, of the desolate waste of vacant land in the very heart of London's fashion and gayety. One year, two years, three years passed, still the same state of things. One day one heard for a certainty that a large Parisian hotel was to be started at once; the next, that shops, restaurant and flats were to be erected, but perhaps no one was ready to believe that out of the dust of "Her Majesty's" was to rise another opera-house.

Yet this is the case, and we here produce a plan of the scheme as proposed by the architect, Mr. Walter Emden, some of whose theatres have lately been illustrated in the *American Architect*.

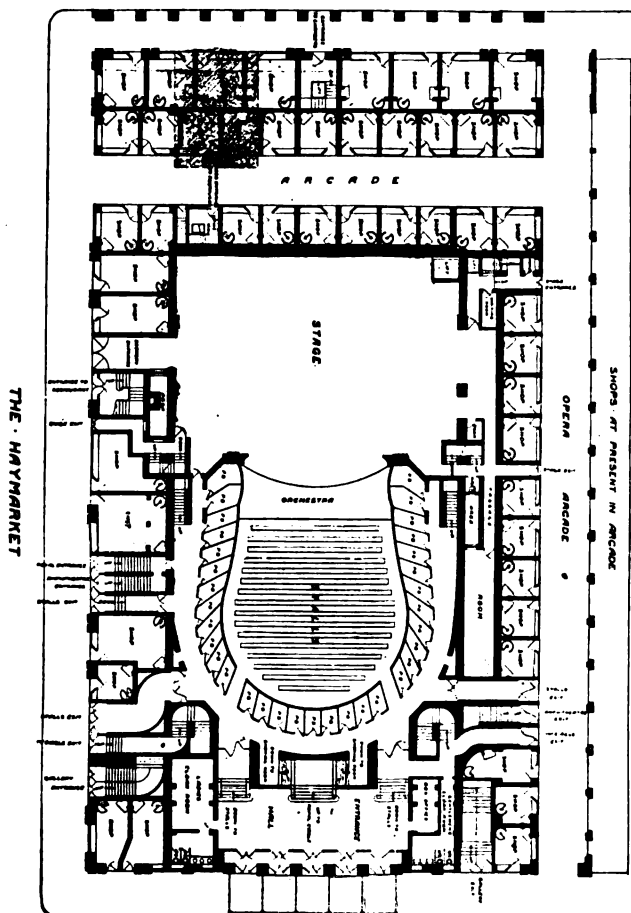
The opera-house, as shown on this plan, is virtually surrounded with shops, which is distinctly against the rules of the London County Council and, at the time of receiving the plan from our correspondent, we learn the drawings had not been approved by that body. There is, however, every reason to believe that, provided the shops are made fireproof, the plans will be passed.

It appears to us that it is a matter of the greatest and gravest importance whether a new national opera-house, which does not strictly comply with the local requirements, be erected or not. Surely,

in a great undertaking like this all the precautions insisted upon in smaller theatres should also be insisted upon here. Time alone will show if this is allowed.

Apart from officialdom and red-tape comes the question of the importance of such a structure as a new opera-house in such a city as London. Comparing the plan with many of the Continental

PALL : MALL



CHARLES STREET

theatres which have been illustrated in this journal during the past year, we must say that it appears poor: look, for instance, at the narrow and insignificant entrance vestibule, the tortuous and twisted exits, the comparatively narrow staircases—all these may be most ample for the safe accommodation of the public, but they look meagre and poor beside the plans of the Continental opera-houses we have referred to.

The cloak-room accommodation is most deficient for an opera-house. Again we invite comparison with the foreign theatres. The Royal entrance is placed next to the amphitheatre entrance and surely this is an error of judgment.

In opera-houses there must be a nightly and constant change of "bill," consequently much changing of scenery, and so a large stock is required even for a week's performance. Yet on looking over the plan we have failed to find a single scene-dock, or store, in which to keep the scenery necessary for the week's repertoire. The consequence will be that the scenes must be kept hanging or placed in the "cuts," crowding the stage and increasing the danger from fire.

Then again, while the shops may be necessary to enable the syndicate floating the scheme to show that a dividend can be earned, they entirely ruin the building as an opera-house; they eat into the plan; they cause awkward turns and twists in the passages, and should a fire occur in any of them they would drive smoke into the exits.

All this brings us down to the hard fact that London cannot pay for two opera-houses. There is, at present, no demand for them, so the shops must be made to skirt round the site, and their rentals bolster up the undertaking. With such adverse circumstances, what else could the architect do? True, he has ruined his scheme and lost his opportunity, but, doubtless, no one feels this more than he does. Let us, at least, hope so.

As to the elevations and interior, the least one can say about the drawings we have seen is that they do not inspire one with the idea that London will be the more beautiful for this addition to her buildings. They do not depict an imposing structure, such as an opera-house should be. They are, in fact, most disappointing.

HUNT'S SUCCESSOR IN THE ACADEMY. — Professor Menzel, of Berlin, has been elected a Foreign Associate of the Académie des Beaux-Arts, in succession to the late Richard M. Hunt.



STATUS OF NEW ORLEANS AMONG AMERICAN CITIES. — ANTIQUARIAN PUBLICATIONS. — A CURIOUS CHARACTERISTIC. — DESTRUCTION OF AN ARCHITECTURAL RELIC. — A NEW MEDICAL BUILDING.

IF Julian Ralph, the indefatigable traveller and writer, is to be accepted as an authority, we are now enabled to fix the status of New Orleans among American cities in matters having an architectural or quasi-architectural interest. In his comparison of other American cities with New York, Mr. Ralph places New Orleans with Washington as leading the game, fruit and vegetable market; and along with New York, Chicago, San Francisco and Galveston, among the "capitals of good cooking." — Washington, Richmond and Milwaukee being "sub-capitals." He declares that the only good cooks in the South who cater to the public are the French cooks of New Orleans and Galveston. He ranks this city with Cleveland, Minneapolis, St. Louis, San Francisco and Detroit in point of splendid residential streets. He calls attention to a characteristic shared with Galveston, — "refreshing water-side resorts within its boundaries, the like of which the people of other cities are put to trouble, expense and travel to get at." The Boston Club of New Orleans he declares to be in the front rank of club headquarters in cities of the same size in the East, and predicts that New Orleans will early have a place in the list of good hotel cities, by reason of the new St. Charles, "one of the world's fine hotels," to be completed and opened in January. It will doubtless be gratifying to the citizens of this southern metropolis to know that all these things are to be said regarding the city of their especial pride. But, truth to tell, some of these estimates seem exaggerated to one who has learned the city by a residence of several years therein, and is not committed by birth to an enthusiastic regard for it. While apparently exhausting the excellences of the city, however, Mr. Ralph does not exhaust its curious characteristics, which are, after all, the city's chief features and what visitors come here to observe. These characteristics will be the more fully appreciated in the future through Miss Grace King's "*New Orleans, the Place and its People*" and the recently published book upon "*New Orleans as it Was and Is*," by Henry Castellanos, a local journalist and antiquary, who has filled his volume with many interesting illustrations of buildings, now no more.

One characteristic of the city appears to have escaped the attention of scribbling visitors heretofore. It is one that is far from admirable. It would, in fact, seem to contradict the city's much vaunted reputation for hospitality.



The Old Court-house, Algiers, La.

In all dwellings having front yards, the yards are fenced, the gates are kept locked, and a bell or electric signal is placed on the gate. It would appear the reverse of hospitable to keep a visitor upon the sidewalk, whatever the weather might be, until a servant answered the summons and unlocks the gate. It is an even worse feature of this custom that such a large number of gate bells in New Orleans should be in a chronic state of unserviceableness, and hence that the chances of a visitor attracting the attention of a servant should be so slight.

The protests, heard on all sides, against the destruction of the old Spanish Cabildo ought to receive emphasis from the loss of another public building of deep historic interest, destroyed in the fire which, on October 20, swept off ten blocks of that portion of the city known as Algiers, lying on the left bank of the Mississippi River. This building was the old Duverge plantation residence, erected in 1812 and used since 1869 as court-house and police-station. It furnished a type of the Louisiana plantation-house, and as such was quite closely copied in the Louisiana Building at the Columbian Exposition. It is soon to be replaced by a substantial brick court-house with modern appointments, to cost about \$25,000.

In general the fire was beneficial to this district of the city. It destroyed but few really fine residences and these will be rebuilt and improved upon in the rebuilding. Quite a number of shanties were destroyed, and a larger number of the one-story frame double cottages so monotonously common in New Orleans. The shanties will not reappear, and some of the cottages will be improved upon. At

all events, everything will be new and clean for a while in this part of the city. But the principal advantage of the fire will be the stimulus imparted to the provision of protection against such widespread conflagrations in Algiers. Increased protection has been long promised. It can now be no longer delayed. The sufferings entailed by the fire were speedily relieved. The wise and careful administration of a relief fund is worthy of especial mention.

New Orleans should be more widely known than it is, for its devotion to medical science and care of the sick. Its admirable hospitals and its medical schools are in evidence on these points. Gradually the famous "Charity Hospital" is becoming the centre of a group of buildings dedicated to the development of medical



Polyclinic Building.

science. To this group must now be added the new Polyclinic Building, to be completed in time for the use of the classes for 1896. It will have an amphitheatre capable of seating over one hundred students, will provide nineteen rooms for various clinics, and devote an entire floor to laboratories and dissecting.

#### FROGNER HOVEDGAARD.

CHRISTIANIA, November 10.

**A**LTHOUGH the building interest of Christiania is very considerable, and, latterly especially, of rapid growth, architecture as an art by no means flourishes. There are, to be sure, some few instances of originality to be pointed out, here and there, but, generally speaking, modern building shows a depressing sameness of design. Houses of a given material are commonly almost uniform in outer construction. Nor are the materials in use sufficiently diverse to create variety in themselves. In the region of the hotels, office-buildings and largest shops, some stone has lately been employed, and for decoration one sees more or less of the curious native "labradas," which is brought from an island quarry in the fjord. In the rough, this is not unlike a dark quartz. Polished, it suggests black glass, showing here and there, scattered through its depths, small scales of iridescent blue, silver, or green, turned at angles varying with the surface plane of the block. Labrador, both rough-hewn and polished, appears effectively in some façades, and elsewhere in columns and pedestals. Some other ornamental rocks are occasionally used, but the Storthengs Bygning (Parliament House), an imposing Byzantine-Romanesque structure not over thirty years old, is one of the comparatively very few wholly stone buildings which the town can show.

Brick is as seldom seen, for although it forms the basis of nine-tenths of the city's architecture, it is almost invariably hidden under a coat of white stucco, which grows rapidly dingy with the smoke of its first winter. Especially during the long months when the snow is on the ground, a little good red brick, allowed to stand forth uncovered in its native warmth of color, would be a great relief from the present endless walls of plaster, dull or glaring, according to their age.

As one approaches the outskirts of the town, many-gabled villas of hard-finished natural wood become the rule. In the early days, wood was almost exclusively used in the city itself, and as Christiania has often suffered by fire, the result has been that very few buildings of an age sufficient to be interesting are now left standing.

A fine example of the manorial house of 200 years ago may still be seen, however, in Frogner Hovedgaard, the estate of Mr. Gerhard Gade, the American consul. Here for the twenty-five years of Mr. Gade's consulate, Americans have been made welcome, and the old place well repays a visit, as few of its age and importance are now in existence within reach of the city.

A pleasant northward drive of about twenty minutes from the Storthing brings one to Frogner gates, on entering which, passing the vine-covered porter's lodge, one finds one's self in a large courtyard, trees and shrubs concealing its outer limits, and an ancient sundial marking the grass-plot in the centre. The opposite gate leads through a hedge of barberry to the gravel-paved inner court, or *gaard*, where a fountain plays in its stucco basin. The northern boundary of this second enclosure is the house itself, while two great wings, holding the servants' quarters, granaries, store-rooms, etc., shut in on east and west.

House and wings alike are of wood covered with white stucco, through which the beams alone show, and alike are roofed with the curious fluted and glazed tiles common to the country. Both wings are two-storied, as is the main building except in its central part, where a third story is added, and capped with a red-peaked clock-tower. A portico extends from end to end of the house façade and partly down each wing. In its main part its roof is supported by eighteen wooden pillars, wreathed in the strange green and purple flowers of the *cobæa scandens*, and placed some twelve or fifteen feet apart. At the western end of the portico, where house and wing meet, a door stands open into a garden, and there, beneath festoons of woodbine swinging from the outer side, one catches, as in a Claude Lorraine glass, a wonderful glimpse of distant fields and mountains.

The ground-floor of the house contains only the kitchen, pantries, laundry, drying and ironing rooms, etc., the maids' rooms, halls, and at the western end a great ball-room, whose window-panes, now purpled with age, bear names and dates scratched by the diamonds of long-dead and forgotten generations. The second story resembles in plan some of the old English houses in Virginia—a plan unlikely to recommend itself to modern ideas of convenience, but singularly adapted to the giving of large entertainments. The rooms lie in two long parallel strips, running uninterruptedly from end to end of the building. Each room is of generous dimensions, and opens by a broad folding-door into the room of its own strip beyond; while a single or double door connects it with the room of the parallel strip at its side. In the winter the northern suite is used for the bed-rooms of the family, so that the living-rooms may have the benefit of the short hours of sunlight, while with the coming of warmer days, a *hegira* is made to the opposite side of the house. At the eastern extremity both suites terminate in the balconied State ball-room, whose walls are still gay with painted peacocks and little cherubs, though their colors have faded somewhat since the days of Louis XV, when they were new. At the far western end, a frescoed drawing-room, one of four that lie together, opens on the *altan*, or balcony *par excellence*, which, in turn, opens on paradise itself. No lesser name seems worthy of the prospect it reveals.

Sitting here over coffee, in the lovely evenings of summer, the broad awning overhead gently stirring in the breeze that comes up from the garden laden with the scent of many flowers, one looks out over the placid surface of the Frogner Lake, whose water, where the white bridge crosses to its fir-fringed farther bank, narrows to a heavy fall, filling the air with an undertone of humming. There, to the north, looms old Frogner Sæter, pine-clad, raising his rugged bulk in strong relief against the greater heights dwelling remote in blue-gray mystery. To the west, the peaceful curves of undulating fields of grain lead the eye softly upward to more distant forest-lands. Southward, over the tops of swaying birches, between their airy masses and the dim blue mountains on the horizon, gleams Frognerkilen, an arm of the silver fjord on whose far-away opposite bank rise white and shining like a palace in a dream the king's château of Oscarshol. Here and there a faint feather of smoke curling upward from a fleck of red tells where a peasant's cottage is hidden in the trees. Meadows, fields and uplands, mountains and valleys, tilled land and forests, salt water and the sweet "troutful stream," all lie spread in such a richness of peaceful beauty that one cannot look without a certain sadness, or turn one's eyes away without regret.

But the gardens must not be neglected. The way thither lies through a hall where quaint old portraits hang, down a winding staircase, to the portico, and through the door of the woodbine draperies. Here the same view as from the *altan* appears, exquisitely lovely, if less extended than from above, and here, in an ivy-clad recess formed by two projecting alcoves of the house, one may sit among tall flowering plants and store up dreams for the years to come.

Close in the foreground, on the terrace, gorgeous nasturtiums run riot beneath the taller foxgloves; gillyflowers, purple and cream, make delicate company with the fragrant masses of the heliotrope, while rose-trees, heavy with great perfect blossoms, rise high above them all, trained in the Norwegian fashion, to grow like cocoanut palms in miniature, with some four feet of bare and twigless upright stem, carrying at the top a round bouquet of flowers and foliage.

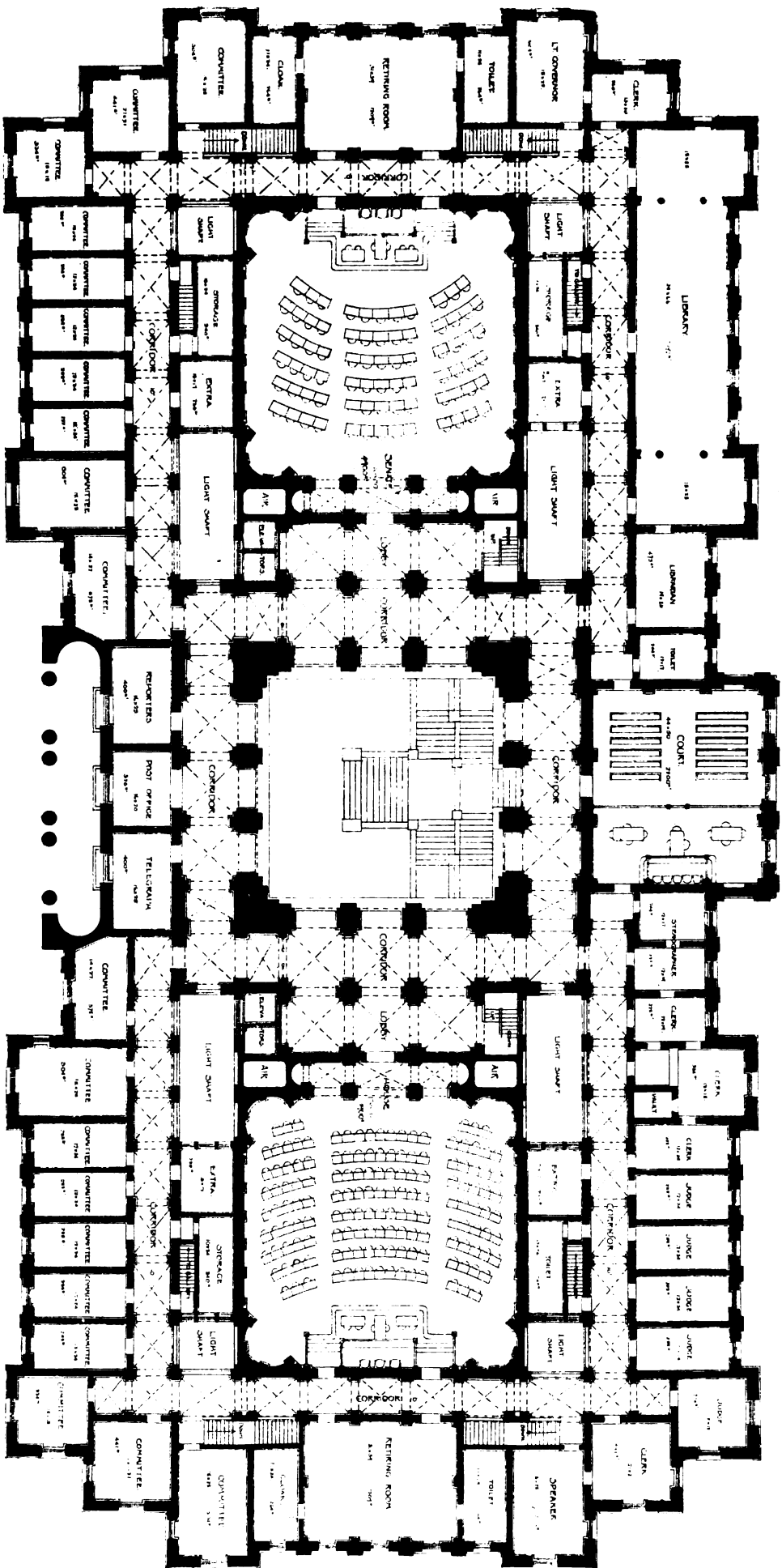
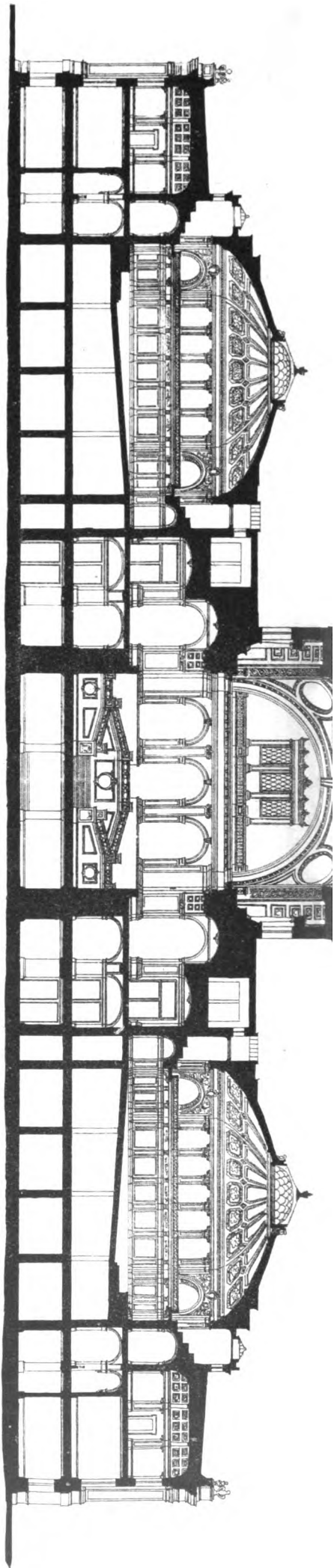
The path pursued leads on to the Linden Allée, an avenue of fine old trees whose curving branches meet high over head and make a flickering shade above the garden benches and round white table at the farther end. Through this stately walk one comes upon a stretch of velvet lawn, broken occasionally by groups of tall foliage-plants and beds of broad-faced pansies. A clipped yew hedge runs along the northern side, and nesting in its central curve is a little white garden seat for two, so quaint in design, so suited to its formal background, that thought at once supplies it with a *Beau Brocade* and his Dresden Daphne, for whom it was certainly built, and for whom any modern successors would be but profanation.

The northern front of the house opens on this broad lawn, and so black do the army of windows show that one does not at first notice that some are mere painted blackness on the wall, designed to preserve symmetry of spacing. This very characteristic feature receives an added touch in some houses, where painted windows are provided with painted curtains, the pattern of the lace so carefully carried out and the very folds so exactly reproduced as to defy all but the closest scrutiny.

Paths wander in every direction in this fair old garden, up hill



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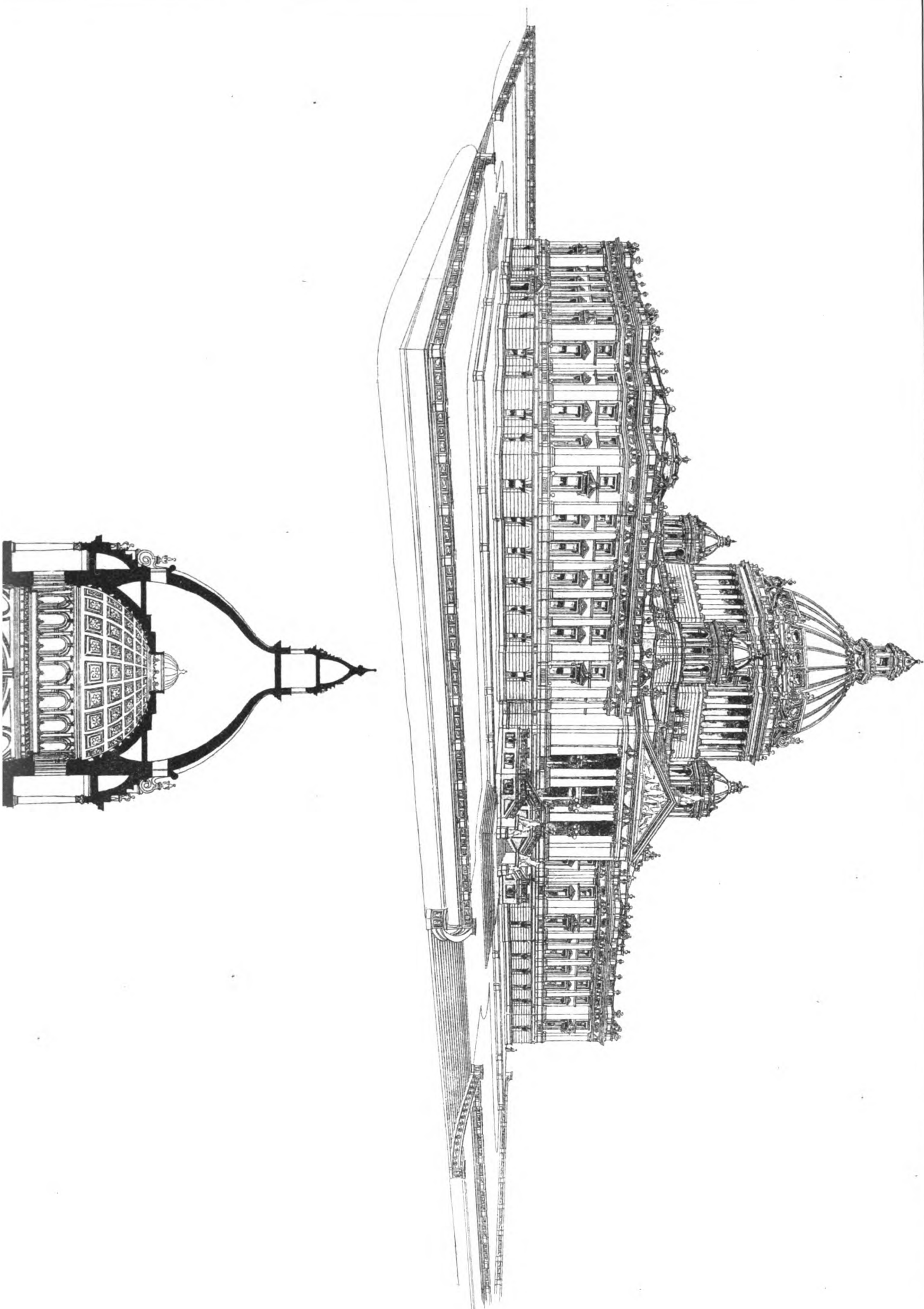


PLAN OF THE SECOND FLOOR.

DESIGN FOR THE MINNESOTA STATE-HOUSE, SUBMITTED IN THE SECOND COMPETITION.  
 CYRUS K. DEAN, ARCHITECT.

AMERICAN ARCHITECT AND BUILDING NEWS, JAN. 11, 1896.

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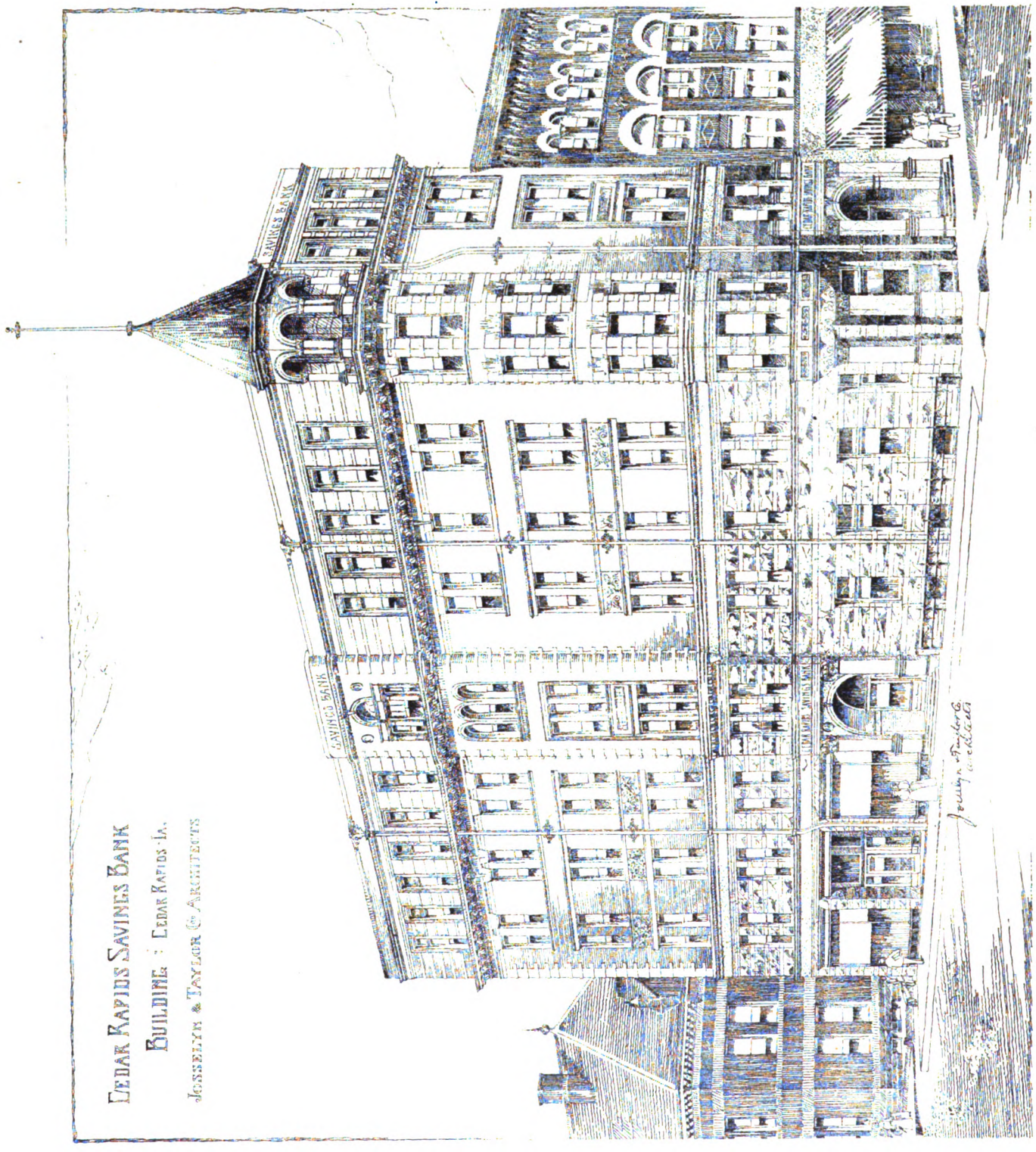






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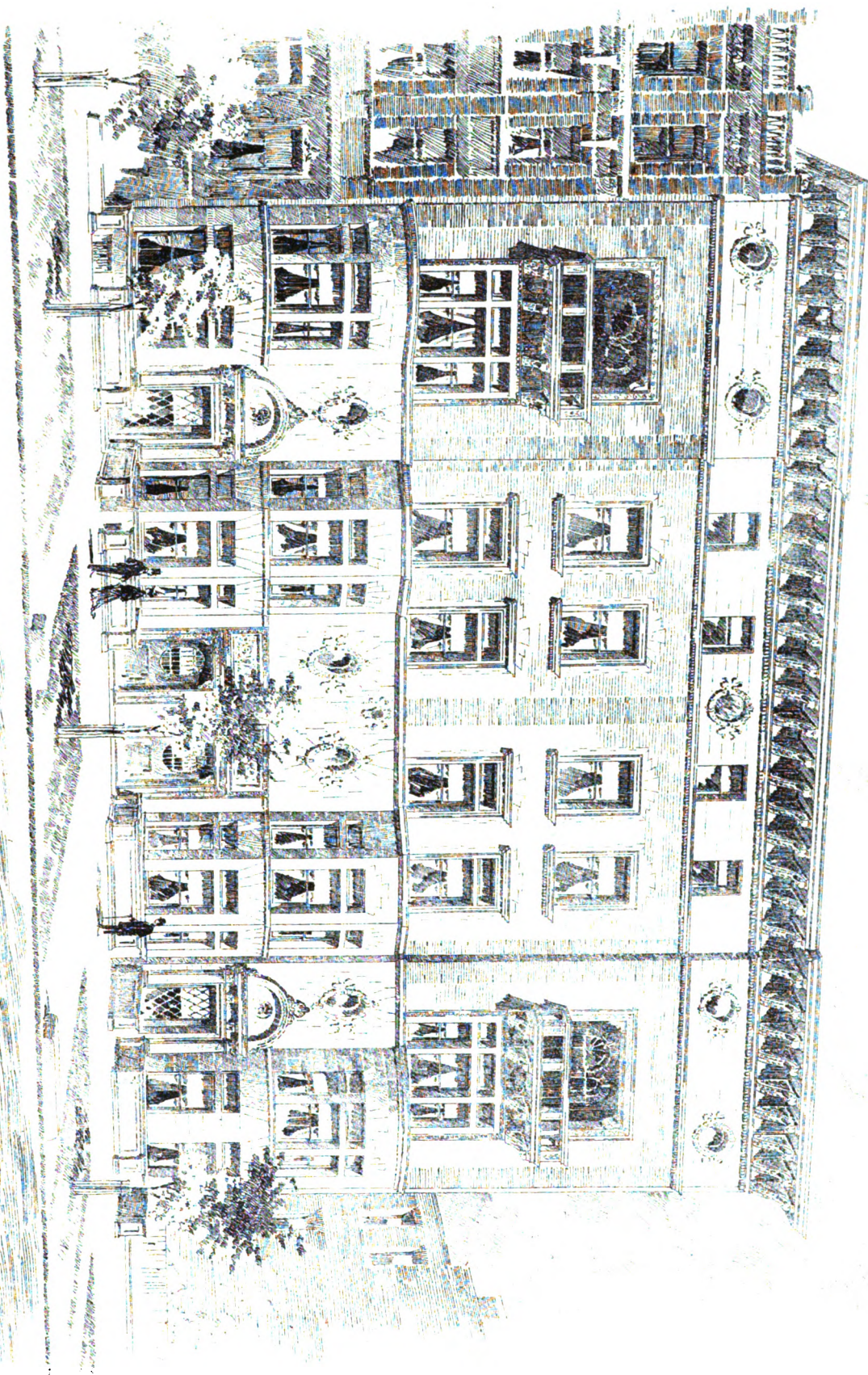
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HOUSE AT WESTON, MASS  
*James T. Kelley Architect*







DESIGN FOR A GROUP OF HOUSES ON EIGHTY-SIXTH STREET, NEW YORK, N. Y.

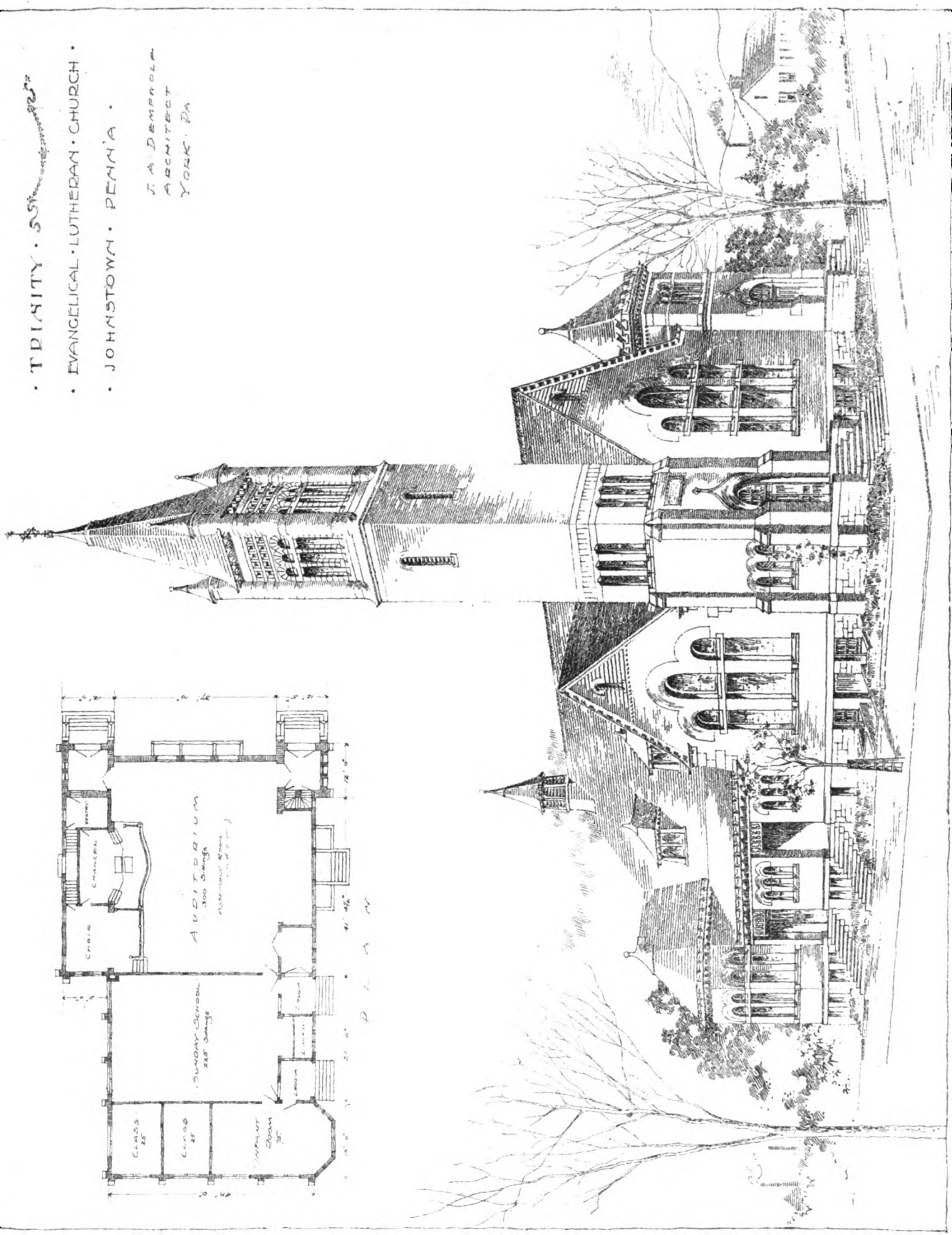
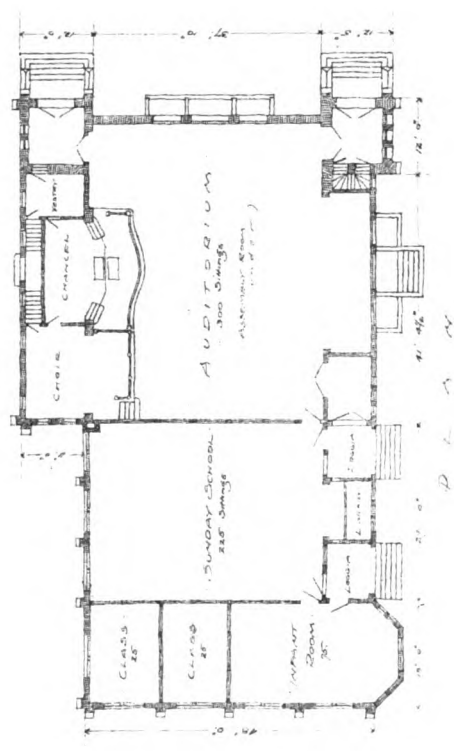
GEORGE E. WOOD, Architect.





• TRINITY • SUNDAY SCHOOL •  
• EVANGELICAL LUTHERAN CHURCH •  
• JOHNSTOWN • PENNA •

J. A. DEMPSEY  
ARCHITECT  
YORK, PA



RECEIVED FEBRUARY 11, 1896





and down, and behind alluring shrubberies; but if one goes straight on from the Watteau seat, past a single line of limes, it is to descend a steep terrace to a lower, larger lawn, where great trees stand apart to show the beauty of soft greenness.

Hidden away under a bank, a bed of pinks is bending under its weight of blossoms and filling the air with the scent of cloves. Farther on, a pyramid of holyhocks will soon burst forth like Solomon in all his glory, and here is a rainbow company of asters and great silky poppies, the grace of all Norwegian gardens. Beyond, on higher ground, like a ruined tower on a hill top, stands a tall Lombardy poplar, most mediæval, most lonely of trees. Small, fairy-like birches cluster about its foot, and a white seat gleams in the thicket, but a little stream runs on the hither side, to be crossed by its white-arched bridges.

Flower-beds now give place to shrubs and ornamental trees, and then succeeds smooth lawn, ascending unbroken to a little hill whose wooded summit is crowned by a belvedere of the ancient sort, eight-sided, glass-enclosed, with frescoed ceiling. The grove surrounding is carpeted in early spring with cowslips, and later with fragrant wild strawberries. To the south, its paths, strewn thick with pine-needles, lead to the kitchen-garden, whose outer barrier is the broad raspberry field, where delicious fruit will be abundant in August. Beyond, in the hot-house, where the door opens under a green-and-gold curtain of canary-vine, grapes are growing and doing well, though they can be brought to nothing out-of-doors.

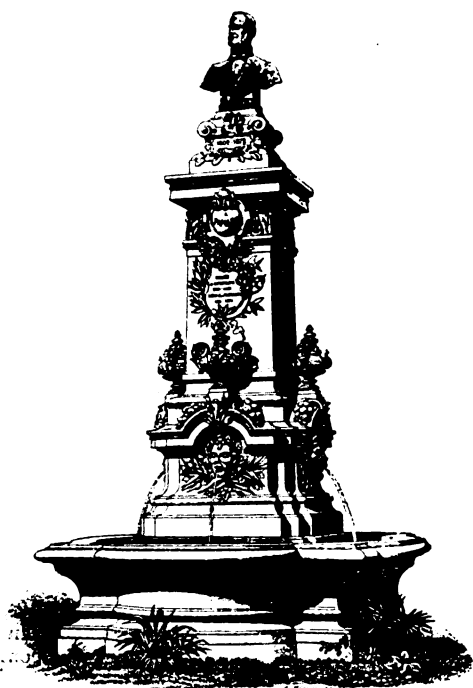
Then, past the ornamental beds of Indian corn, and the forcing-frames, and the tomatoes struggling as wall-fruit to a precarious maturity, we reach the region of vegetables, where, under a disguising introductory flourish of sweet, old-fashioned kitchen-garden posies, Jerusalem artichokes reach tender perfection, and other delicate morsels flourish — potatoes, kohlrabi, cabbages, and such staffs of northern life being retired to the fields as too gross for garden society.

Farther on is a very creditable strawberry patch, but the flavor of the wild strawberry, found in masses in every forest in the country, and brought in great quantities to the market, is really far superior to that of the cultivated variety.

Next we come upon a noble array of currants, black and white, and gooseberries of all kinds, all putting their best foot foremost under this northern sun, which evidently makes up in perseverance what it lacks in strength, since jucier, larger or sweeter small fruits are nowhere to be seen.

Now a scent as of Araby the Blest tempts us through the little orchard to where a fine old pear-tree rises among sweet-peas and mignonette to spread its gnarly arms close against a stuccoed wall; and thence, through a shady passageway whose entrance is half hidden in flowers and hanging greenery, out into the quiet, sun-bathed *gaard* again, where the fountain will still be talking, though nobody marks it. — *K. Monck in N. Y. Evening Post.*

#### THE KEATS CENTENARY.



Monument to Parnassus, Avignon, France. M. Guimard, Architect. From *La Semaine du Bâtiment*.

1795; the bi-centenary of the death of the composer, Henry Purcell, November 21, 1695, and the centenary of Thomas Carlyle's birth, December 4, 1795; short notices of each of which may be interesting to your readers.

Sir Charles Dilke — whose grandparents were intimate friends of the poet — has deposited with the Trustees of the Public Library,

Chelsea, a small but interesting collection of articles, connected with him, viz, books, letters by or to him, engravings, etc.; all carefully labelled and exhibited in the Reference Library. Among the books once belonging to Keats are his "*Paradise Lost*," "*Ovid*," "*Shakespeare*," each containing drafts of poems; his own copy of "*Endymion*," with all the sonnets and many of his other poems copied on note-paper pages at the end in Keats's own handwriting. There is also a large gold locket with hair cut off after death; several pen-and-ink sketches by Haydon, and, probably by the same, a mask taken during life, looking less deathlike than these usually do, showing his fine well-marked features; some engravings are also shown in the collection, but none so fine as that by his loving friend Severn, prefixed to Monckton Milne's "*Life of Keats*." He is described as having a most vivacious countenance, much beauty of feature, large sensitive blue eyes, and thick auburn hair curled round a head somewhat small for the broad shoulders. Besides the more personal relics of one much beloved by all who knew him, there are some twenty letters, of which more anon.

John Keats was another of the great poets so intimately associated with the City of London, being born in Moorfields, and Milton died hard by. The house in Moorfields was that of his grandfather, who kept a livery-stable; but it must have been one of a high order, since on their father's death, when the poet was fifteen, he and his brothers and sister shared the sum of £8,000 amongst them. For the ten years previous to this event Keats had been at a school at Enfield. While there he snatched every possible opportunity of translating Virgil and Fenelon, and of studying Grecian mythology from Tooke's "*Pantheon*" and "*Lemprière*" — for Greek he never learned. He was articled to a surgeon, but though he passed creditably through his studies, it was manifest that not in science, but in poetry, he would become famous. Never did any youthful poet exhibit a more thorough possession of those faculties on which genius rests, and it is impossible to say what Keats might have been had he lived to become rightly acquainted with himself and with mankind. Unfortunately, a hereditary tendency to consumption was developed by his untiring devotion to his brother George, who died of that disease, and a chill hastened its progress; while at the same time his ardent affection for Miss Fanny Brawne — hopeless, through his want of means — all resulted in so serious an illness that a short stay in Italy was deemed advisable, Shelley inviting him to visit him at Pisa. At great sacrifice Severn went with him, but in spite of his loving care and the efforts of Dr., afterwards Sir Andrew Clark, Keats died at Rome on February 27, 1821, so quietly that Severn, tenderly watching him, thought that he slept. His last words were, "Thank God, it has come at last." He was buried in the beautiful Protestant cemetery near the pyramidal tomb of the Tribune, Caius Cestius. Miss F. Grover has added to the collection a very pretty little water-color view of the two grassy mounds, apparently nearly three feet high — the graves of Keats and Severn, the one having the charming little monument raised by Severn entirely at his own expense — though he then had no more than half a crown a day — to his beloved friend's memory.

In an autograph letter by "Barry Cornwall" the following elegy occurs:

"Pale poet in the solemn Roman earth,  
Cold as the clay thou lay'st thine aching head!  
Ah, what avails thy genius — what thy worth —  
Thou art dead — dead."

"Too early banished from the place of birth  
By Tyrant Pain, thy too bright Spirit fled!  
Too late came Love to show the world thy worth,  
Too late came Glory for thy youthful head!"

"Mourn, poets! mourn — he's lost! O minstrels, grieve,  
And with your music let his fame be fed!  
True lovers round his verse your sorrows weave  
And, maidens! mourn at last a poet dead.  
He is dead — dead — dead!"

With regard to Keats's bust at Hampstead, a local journal of July 21, 1894, says, "On Monday such a congregation assembled in Hampstead Parish Church as has never been brought together there. It was mainly representative of the poetry and literature of England and America, the occasion being the unveiling of the American Memorial to John Keats."

The memorial, originated by Lowell — a fine bust of the poet — was executed in marble by Miss Anne Whitney, of Boston, Mass., and bears the following inscription:

"TO THE EVER-LIVING MEMORY OF JOHN KEATS  
THIS MONUMENT IS ERECTED BY AMERICANS  
MDCCLXXIV"

This was handed over to the British people by Mr. F. H. Day in the absence of Bret Harte, and received by Mr. Edmund Gosse, who afterwards hung on it two wreaths of laurel; later on, a wreath of sweet peas inscribed, "To Keats from Sappho (of Green Springs) — Happy is he who trusts to clear Futurity his darling Fame." A tablet is about to be affixed to the house in John Street, Hampstead, in which Keats resided.

Byron termed Keats's first volume — the "*Juvenile Poems*" — "the drivelling idiocy of the manikin"; and when "*Endymion*" appeared in 1817, it was criticised in a strain of contemptuous severity in the *Quarterly Review* by Mr. Croker, who, writing to a friend about this

article, said "Gifford added pepper to my grill." Later on, Jeffrey, in the *Edinburgh*, reviewed this poem with "Hyperion," "Lamia" and others, in a kindly spirit; but Keats was then dying. It has long been held that Croker's critique killed him; but bitter though it was, and keenly felt by the youthful enthusiast, a vigorous frame would have helped him to rise superior to it.

In a letter to Mr. I. A. Hessey (one of his publishers, 1818), Keats said "J. S. is perfectly right in regard to the slipshod '*Endymion*.' That it is so is no fault of mine. No! though it may sound a little paradoxical. It is as good as I could make it — by myself. That which is creative must create itself. I was never afraid of failure, for I would sooner fail than not be amongst the best."

To his brother, Keats wrote, "I don't know who wrote those articles (in his defence). I think I shall be amongst the English poets after my death. Even as a matter of present interest, the attempt to crush me in the *Quarterly* has only brought me more into notice, and it is a common expression among bookmen, 'I wonder the *Quarterly* should cut its own throat.'" The following letter to his brother George from Mr. Ollier, by its date, April, 1817, must refer to the "*Juvenile Poems*":

"Sir, — We regret that your brother ever requested us to publish his book, or that our opinion of its talents should have led us to acquiesce in undertaking it. So many persons have found fault with it in such plain terms, that we have in many cases offered to take it back again rather than be annoyed with the ridicule that has been thrown upon it. One gentleman tells us he considered it no better than a take-in."

Mrs. Dilke writes: "I am anxious to learn what success Keats's new poems have. If the public cry him up as a great poet, I will henceforth be their humble servant; if not, the devil take the public." This same lady, introducing him to her father-in-law, writes: "You will find him a very odd young man, but good-tempered and very clever indeed."

We may in this connection give a letter from Keats:

"My dear Dilke, Mrs. Dilke, or Mr. W. Dilke, whoever of you shall receive this present, have the kindness to send, per bearer, '*Sybilline Leaves*,' and your petitioner shall ever pray as in duty bound. Given under my hand this Wednesday morning of November, 1817. *Vivant Rex et Regina* — Amen. JOHN KEATS."

In a new edition of the "*Letters*," some of those to Fanny Brawne are for the first time published; and this is, by some, deemed sacrilege. Be that as it may, they all breathe passionate love and devotion to one on whom his "whole existence hung," and yet this was the woman, who, ten years after his death, when a memoir was proposed, wrote to Mrs. Dilke that "the kindest act would be to let him rest for ever in the obscurity to which circumstances have condemned him."

"A thing of beauty is a joy forever," is often quoted by many who do not know "*Endymion*," of which that is the first line; and of which poem it has been most truly said, that "no book could more aptly be used as a test to determine whether a reader has a genuine love for poetry."

Again, where can we find a more charming and vivid word-picture than the "*Ode on a Grecian Urn*," of which we venture to give a short extract; difficult where all is exquisite.

"Thou still unravished bride of quietness!  
Thou foster-child of silence and slow time!  
Sylvan historian! who canst thus express,  
A flowery tale more sweetly than our rhyme.  
What leaf-fringed legend haunts about thy shape  
Of deities or mortals, or of both —  
In Tempe? or the dales of Arcady?  
What men or gods are these? What maidens loth,  
What mad pursuit? What struggles to escape?  
What pipes and timbrels? What wild ecstasy?  
Who are these coming to the sacrifice?  
To what green altar, O! mysterious priest,  
Leadest thou that heifer lowing at the skies,  
And all her silken flanks with garlands drest.  
What little town by river or sea-shore,  
Or mountain built with peaceful citadel  
Is emptied of its folk, this pious morn?  
And, little town, thy streets for evermore,  
Will silent be, and not a soul to tell  
Why thou art desolate, can e'er return!"

"Cold Pastoral!"

When old age shall this generation waste  
Thou shalt remain in midst of other woe  
Than ours, a friend to man, to whom thou say'st  
'Beauty is truth, truth beauty,' that is all  
Ye know on earth, and all ye need to know."

The peculiar interest attaching to this ode is that it was in all likelihood suggested to the poet by a visit we know he paid to the sculpture galleries of the British Museum. Quite recently two elegant urns have been removed to the vestibule of the Museum, the larger and principal of which is three feet high, and six feet in circumference at the widest part. These, with many others in the galleries, taken in conjunction with engravings of urns — notably Lord Holland's — gave the evident inspiration; for though Keats wrote the "*Urn*," no single work of antiquity could have served as the *motif* for his ode — since these subjects are not known to occur together on any relic of Hellenic genius extant.

We close our notice of Keats with some extracts from one of his letters to his brother, interesting at present:

"Russia may spread her conquests even to China . . . I think a very likely thing that China herself may fall . . . Turkey certainly will . . . Dilke — whom you know for a Godwin-perfectability man, pleases himself with the idea that America will be the country to take up the human intellect where England leaves off."

## THE ORIGIN AND STYLES OF POMPEIIAN DECORATION.

IN general, all those who speak of Pompeian decoration talk of it as if it had only one type, uniform and unchangeable. Instead of this, even the Pompeian decoration suffered the effects and consequences of time, and traversed various periods, which correspond to its varied artistic manifestations. In considering the Pompeian decoration, in the aspect which I here suggest, there is one view taken by professional artists, who, being exclusively practitioners, do not usually pay much attention to the analysis of style in æsthetic forms; and another view favored by many historians of the arts, particularly by those belonging to the vast category of the writers who copy their ideas from others. Since the habit of considering the Pompeian decoration independent of its stylistic variations is old, and had advocates of reputation, as, for example, Mazois, who, in his book, "*Les Ruines de Pompeii*," Vol. I, page 25, maintains the thesis of the immobility of expression, against which modern criticism, fortified by reason and by artistic examination, has rebelled, it is found that to this day the theory of Mazois has followers; and no matter how many publications may be issued in elucidation of the Pompeian work, the old and erroneous theory, which we now absolutely contest, has not ceased to enjoy credit.

The artists err in another point. To them the Pompeian art appears to be exclusively composed of little buildings, colonnettes and flying figures. Instead of this, it presents figurative legends, the significance of which is quite as interesting as the ornamental form under which it is shown; and it was the study of the significance of these legends which gave to the learned the key by which to penetrate into the history and origin of the Pompeian decoration. For the satisfaction of the decorators and of superficial writers, it ought to be said that, in their erroneous opinion concerning the absence of change in the Pompeian decoration, they have a certain support, in that, writing or speaking of such decoration, they refer to such work as is already beautiful and complete in all its elements; that is, to the little edifices in perspective, the candelabra, skilfully put together out of ornamental lines, and to the half-naked Cupids and Bacchantes; but it is a very arbitrary judgment which limits in this way to a single type an art which lasted for several centuries; and, certainly, this limitation does not excuse either the arbitrariness or the inaccuracy of the judgment.

Since I am speaking of arbitrary and erroneous notions, let it be permitted to me to mention another, which is widely diffused. Every one knows that the Pompeian decoration flourished during the Roman Empire, and that even at the time when the catacombs, or Christian cemeteries, received their embellishments, it continued in use, although artistically impoverished. Now, therefore, those who speak of Roman pictorial decoration turn their minds only to Pompeii and Herculaneum; few, except the learned, or the special students of the artistic period which we are now investigating, ask themselves what pictorial decoration Rome possessed before the Empire. And yet under the Republic Rome flourished, and if the democratic government had not so great a love for sumptuousness as the imperial government, it was by no means insensible to the charms of painting. Unfortunately, the remains of decoration anterior to Augustus are rare in Rome, but the discoveries in the Esquiline sepulchre, near the so-called Temple of Minerva Medica, now exposed at the Museum of the Thermæ, are sufficient to enable us to reconstruct the system of decorative painting in use among the decorators of the Republic. The pictures of the Esquiline sepulchre display figurative subjects belonging to the cycle of the myths of Lavinium and Rome, and this sort of painting is the perfect antithesis of the vague, light and sensuous Pompeian decoration.

It is quite easy to investigate the origin of the Roman ornamentation of the Republican era; both its epic character, and the large part which the figurative element holds in it, show us its direct derivation from the Etruscan wall-painting, and from the Greek painting of Polygnotus and Panenus; but the origin of the Pompeian decoration is less evident to minds even a little skilled in matters of Roman art. To modern criticism is due the discovery of this origin, and it is more reasonable than might be supposed possible.

Whence then, did the Pompeian decoration take its elements?

It took them, answers the modern criticism, from the Alexandrian, or rather, the Hellenistic art. Not Hellenic art — let us not confound the two.

The historians of literature maintain that Greece, after the period of its artistic and literary splendors, had a new and original revival at the courts of the successors of Alexander, and the Alexandrian poetry delighted in the pathetic myths and idyllic dialogues. By the natural correlation which exists among different forms of thought, sensible analogies existed between this literature, which had abandoned the inspiration of religion and of heroic deeds, and the Pompeian decoration, with its figurative panels, consecrated to the exaltation of the amorous mythology; and this style of painting, like the literature, was called Hellenistic. Just as Rome had gained

so many beautiful inspirations from Greece, when the latter was prosperous in condition, so it still brought from Greece, in the time of its decadence, elements of study.

The pictures which embellish the Pompeian decoration are, three-quarters of them, of mythological subjects, presenting scenes of love. Jupiter, among the painters of Pompeii, appears exclusively as a lover of Danaë, or Io, or Leda, or as carrying off Europa; Venus is represented in the arms of Mars, or as running from the pursuit of Apollo; and a great part of these pictures are copies of Greek originals. Under this aspect, the Greek or Hellenistic origin of the Pompeian decoration is indisputable. Nor is it less so under the aspect of its architectonic and ornamental elements. In fact, the architecture of this decoration is almost exclusively of the trabeated class; of the full round arches, the specialty of the Latin architecture, it has not even the shadow; for we cannot place in such a category the timidly elliptical arches with which it abounds. In all things, moreover, it had an aspect of slenderness and grace which a Roman artist could never have thought of unless under a vivid impression of something seen outside of his own country, or suggested by an architectural inspiration which was not Latin.

To insist further on this point is not here required, and I invite the reader who wishes to investigate more deeply the origin of the Pompeian decoration to procure the two masterly books of Helbig, which develop the argument in an exhaustive manner.<sup>1</sup>

It may excite some surprise to see that the Pompeian painting should extend more at Pompeii than at Rome; and, although reasons exist which justify this apparent singularity, it is, nevertheless, important to keep in mind that Pompeii adopted certain customs before Rome, which had not palaestra for the games of its youth, or stone theatres in place of temporary wooden ones, at so early a period as the opulent city of the Samnites, which had become the favored and agreeable resort of the Romans. Moreover, Rome, the abode of the rich, did not always content itself with the counterfeited decoration of Pompeii, but, instead of having its columns and candelabra painted, had them real, in marble and bronze. Hence the Pompeian decoration is the reproduction in painting of little edifices and real perspective views, which, at Pompeii, were executed in colors, for economy and greater rapidity of work; and after this scenographic decoration had become acclimated in Latium, it became, so to speak, a necessity, and was adopted even where reality might easily have been substituted for representation.

Let us come, therefore, to the style of this decoration. This must be sought among the remains of wall-painting which exist at Pompeii and Rome, and in the museums of Naples and the Thermæ. A superficial observation is sufficient to convince any one not blinded by the theory of Mazois, that at Pompeii there is a progress from the simplest to the more complicated decoration, comprising columns, candelabra and little edifices. It would be therefore unjust to unite one with the other, and to confound in one the two different manifestations, as much as it would be to suppose that the Doric and Corinthian orders had the same expression, or that the Parthenon and the Pantheon showed no essential diversity. Logic, therefore, indicates an ascent from the simple to the complicated, and leads us to designate the simpler style as that from which the others originated.

The first style, being the simplest, is also the most organic; and is composed usually of bosses of various colors, and is an incrustation of stucco, and not such painting as is applied to the plane surface of a wall. Mau, in a noted work on Pompeii, the best in the fidelity of its reproductions,<sup>2</sup> calls the first Pompeian style that of the Incrustations, — *der Incrustationstil*; and this apt designation accords with the words of Vitruvius, who informs us that the ancients imitated first of all the variations and contrasts of marbles.<sup>3</sup>

An example of the Pompeian decoration of the first style is offered in Pompeii, in only two houses; that of Sallust, and that of the Faun, which were entirely ornamented in the manner of this style; and in the Basilica. In the other Pompeian edifices are found only fragments.

We have, therefore, to consider a kind of plastic work, in imitation of marble incrustations, which is evidently derived from the anterior system of incrusting walls with marbles of various colors, which, at Pompeii, had a modest and economical aspect. At the Alexandrine Court, and at Rome, costly marbles were employed, which, in a provincial city, like Pompeii, were naturally replaced by bits of colored stucco. The practice of this first style commenced in the second century before Christ, and the style may thus be designated as the "*Style of the Second Century before Christ*." Its range of colors is always limited to yellow, green, red and black; and its architectonic forms consist almost exclusively of panels between pilasters, in extremely low relief, and of projecting bosses.

In regard to ornamental refinements, the first Pompeian style was as modest as the succeeding styles were rich. The House of the Faun, ornamented throughout as I have said, with the forms of the primitive style, is still that which furnishes the most beautiful mosaics in Pompeii; and the priority of this house over the others, and hence the antiquity of the decorative type of the walls, would seem to be demonstrated by the fact that here was found the famous

mosaic, the "Battle of Alexander." The first style, or style of incrustation, is not rigidly fixed upon the type indicated; in certain cases, although rarely, the incrustation takes the form of lozenges, or flowers, of a Greek quality.

The second style which could be called architectonic is that which leads up to the richest style of Pompeii — that in which the rigidly architectonic element has a larger part than the capriciously ornamental element. Vitruvius must allude to this style when, after mentioning the incrustations of marble, he adds, "So the ancients imitated the different distribution of cornices and panels, in squares of yellow and red; and then, going forward, began in addition to imitate figures of edifices, columns in relief, and frontispieces."<sup>4</sup> These last words indicate the successive development of the first architectonic style. The cornices with pilasters, the columns and the ordinary panellings of the first style form also the second, but with the difference, that the second does not adopt stucco; hence, it is not a plastic work, but one of painting. Its aspect is architectural, without extravagance, decorative, and without excessive regard to the laws of construction. It is distinguished by its twofold division of the wall-surfaces, the lower part being formed of a smooth surface, ornamented with a cornice at the top, and incrustated with marble, which stands upon a regular basement; and the upper part, which represents columns and cornices in the distance. An example of this style is offered by the beautiful decorations on the Palatine, in the house called the "House of Germanicus"; and by those of the house discovered in the garden of the Farnesina at Rome; and in Pompeii, certain walls of the house of the Labyrinth, that of Marcus Gavius Rufus, of Popilius Priscus, and of Siricus, and those of the Temple of Jupiter. The difference between the first and second style comes from this — that the first style is too constructive, and, therefore, does not indicate perfectly its decorative function, which, on the contrary, is perceived in a reasonable measure in the architectonic or second style. This does not renounce the constructive reasonableness of its columns and cornices, but, at the same time, it decorates itself with festoons, vases and ornaments, and is more vague than the first style.

This second style may be subdivided into two periods, the second of which already suggests the caprices of the third style. Its epoch begins with the colony of Sylla, in the year 80 B. C.; and, as its origin must have been anterior to its introduction into Pompeii, it may be called the "*Style of the First Century before Christ*." Economically, it represents a retrogression, because it has not the stuccos, nor the sumptuous mosaic pictures in its pavements; and, as a characteristic, it adopts in the second period the figured panels, with which the primitive style of Pompeii is not at all ornamented.

Now we come to the third style, the best known, the most elegant, the ornamental style *par excellence*; that which the modern decorators imitate in the erroneous persuasion that it represents the whole of the decorative art of Pompeii. In this style, the columns are frequently replaced by candelabra, and on this account it might be called the "candelabra style." It is as ornamental as the style of the first period was architectural. Here, all is graceful, subtle, delicate; and the panels with figures have much importance, the Cupids capering over them in a thousand guises, while Bacchantes run and fly about, taking the most singular attitudes.

Examples of this style are found in the Temple of Fortune; in the peristyle of the House of the Cithara-player; in the vestibule of the house of Marcus Spurius Mesor; in the vestibule of the house of Lucius Cæcilius Jucundus, and so on. Their color-scheme is simple, making use of white in the ornamental parts; and is less warm than in the preceding style. The wall-paintings of this style are also divided into two parts, the upper part of the wall showing by preference certain elegant bits of architecture, of small dimensions, which trace on the white ground candelabra, cornices, foliage and so on. This style, like the second, is subdivided into two periods. The second period exaggerates the force of the coloring, adopts ornamental motives excessively overloaded, and, in execution, is not so fine as the preceding style. The third style, in its second period, evidently represents the decadence of the Pompeian decoration.

Its epoch was terminated before the earthquake of the year A. D., 63, and calculating approximatively, it may be called the "*Style of the First Half of the First Century after Christ*," or, perhaps, the style of the age of the four Emperors.

Recapitulating, from that which I have hitherto said, it results that the Pompeian decoration is divided substantially into three styles, characterized by their principal aspects, thus:

I. The Style of the Incrustations. (Second century, B. C.)  
II. The Architectonic Style: subdivided into two periods. (First century, B. C.)

III. The Ornamental Style, or the Style of the Candelabra: subdivided into two periods, the second of which is that of decadence [first half of the first century A. D. until the destruction of Pompeii].

Keeping in mind the characteristics which have been described in discussing each of the three Pompeian styles, it will be easy for any one to fix the style and the epoch of any wall-decoration whatever; and on examining the reality, he will abandon forever the erroneous judgment which condemned the Pompeian decoration to an immobility of expression which is contrary to the law which governs all the affairs of the world, and has for base the continual mobility of thought.

ALFREDO MELANI.

<sup>1</sup> *Wandgemälde der vom Vesuv Verschlutteten Städte Campaniens*. Leipzig, 1878. *Untersuchungen über die Camp. Wandmalerei*. Leipzig, 1873.

<sup>2</sup> *Geschichte der decorat. Wandmalerei in Pompeji*. Berlin, 1882. (The text also is extremely praiseworthy.)

<sup>3</sup> "*Architectura*," Vol. vii, p. 53.

<sup>4</sup> *Op. cit.*, Vol. vii, p. 53.

## QUARTER-SAWED GUM.

WHAT to do with the vast growths of gum timber on the river-bottom lands of the South has for years been an important question. Finer timber to look at than the old growth red gum of the alluvial portions of the southern States cannot be anywhere found. In the Yazoo-Mississippi delta, for instance, these old growths cumber the richest cotton and corn lands of the continent. The like is true of the river intervals of Arkansas. It seems a pity that such magnificent trunks cannot be put to extensive use, that they must be laid low and burned in heaps in the process of clearing land. But as yet the commercial demand for gum lumber has been limited. In most sections it is considered of little value. It is true that a considerable amount of gum lumber is annually cut, sold and consumed. Yet any large manufacture of gum, such as pertains to oak, ash, elm, hickory and several of the other hard-woods has, as yet, been impossible, for it would glut the market. The reason for this is because gum is an intractable wood when sawed in the ordinary manner. It is much given to warping, and must be treated carefully in the drying process or it becomes worthless. As a general thing, consumers do not like to handle a wood that has this characteristic. Only those who have special uses for gum, like pork-box makers, who use it for ends, cabinet and car manufacturers, who use it in form of veneers, door-makers, who work it into panels, and a few other manufacturers who have special places for it in their work, manage to utilize gum. In England and on the Continent clear gum is considerably employed under the name of "satin walnut." But combining all the uses for gum it is still in a large measure a neglected wood, because of its tendency to warp, which renders it unprofitable for the careless and unskilled dealer and consumer to handle.

But the fact remains that there are immense quantities of gum in the southern States that must be got rid of. If it cannot be utilized as lumber it must be destroyed, which is a matter to be regretted, since the time will come when timber on this continent of any sort will be scarce. How to make use of gum that will pay the operator a profit is an important question, for if that can be done a large addition to the hard-wood resources of the country will thereby be insured.

In recent years there has been a growing disposition to quarter-saw gum logs as a means of obviating the tendency of the wood to warp. It is claimed that thus treated, gum lumber becomes as tractable and reliable as any product of the trees. If this is so, there is no reason why gum should not enter into extensive use. It has been an objection to this method that it destroys all characteristic grain effects in the wood. It obliterates the figure which it presents when sawed flat with the grain. That might be an objection in its use for interior finish and furniture, but it would not be fatal. When quarter-sawed it could be finished with as fine a surface as any wood that grows, except the better tropical woods. It would have the character of richness and finish if it did not have that of pronounced grain, and that is saying much. For flooring, quarter-sawed gum should be extensively used. There should be a large employment of gum for wagon-box boards, and other plain uses in which durability is required. The coarser product could be utilized for box-making. Thin quarter-sawed gum should have an extensive place in picture-backing, desk-making, for small boxes, and the various places where thin lumber is required. It probably may be assumed that no gum lumber should be cut unless it be in the quarter-sawed form.

Here is a chance for some enterprising lumberman to distinguish himself, and make a fortune as well as fame. Let the man so inclined locate a plant in the midst of some extensive gum resource, and go into quarter-sawed lumber as a specialty. Let him study and experiment in the nature of the wood, its manufacture for special uses, its treatment in the drying process. Then let him make his market, for there will have to be some pioneering work done before consumers can be induced to take hold of it freely. It will not do to slash up gum and put it on the market at a hazard. The work from the stump to the consumer must be a painstaking process. The man or concern which first goes into the manufacture of quarter-sawed gum with special reference to the market, which must be largely made by the producer, will have almost a monopoly of the business. It affords an opportunity for a skillful and creative lumberman to get into a business that is not already overcrowded, for what line of lumber is there which is not overdone and subjected to such severe competition as to render it exceedingly hard to eke out a profit in manufacture and sale? — *Northwestern Lumberman.*



## SKETCH-CLUB OF NEW YORK.

THE regular monthly meeting and dinner of the Sketch-Club of New York was held on Saturday evening, January 4th. Thirty-one members sat down to dinner. President G. W. E. Field presided. After dinner Mr. W. T. Partridge of Columbia College, former holder of the Rotch Travelling-Scholarship and a member of the Club, gave an interesting talk on the subject of European travel

and study. Mr. Field, who has just returned from a short trip in Europe, also spoke on his experiences.

A hearty vote of thanks was accorded to Messrs. Partridge and Field.

## PHILADELPHIA CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

At a special meeting of the Philadelphia Chapter of the American Institute of Architects, held January 8, the following minute was adopted relative to the death of Mr. John Stewardson, late a member of the Chapter:

"It is with deepest sorrow we have learned of the sudden and untimely death of our friend, John Stewardson.

"In commemoration of his influence among us we would here inscribe a tribute to his kindly and noble character and his high artistic nature.

"His professional career, though terminated before there was opportunity for the full realization of the promise he gave, did much to raise the standard of architecture in Philadelphia, and his executed work has placed him among the first of American architects.

"While his natural gifts and his attainments made us respect him as an artist, it was his sunny, buoyant nature that drew him to us as a friend. He was ever ready to help, advise and instruct. He was devoted to his life work, yet his sympathies were not limited by it.

"It is impossible to voice the overwhelming sentiment of loss we feel — a loss not alone to ourselves, but to the community in which his work will stand as an enduring monument to his genius."

## SOCIETY OF BEAUX-ARTS ARCHITECTS.

January 7.

By request of the President, a special meeting will be held tomorrow at 5.15, at the office of Mr. Walter Cook, McIntyre Building, corner Broadway and 18th Street, to take appropriate action on the sudden death of our fellow-member and friend, John Stewardson.

EDGAR A. JOSSELYN.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

FIREPLACE IN THE SOUTH LOUNGING-ROOM OF THE METROPOLITAN CLUB-HOUSE, FIFTH AVENUE AND SIXTIETH STREET, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print issued with the International and Imperial Editions only.]

VIEWS of the exterior of this building were published in an issue for May 5, 1894.

THE CEDAR RAPIDS SAVINGS-BANK BUILDING, CEDAR RAPIDS, IOWA. MESSRS. JOSSELYN & TAYLOR CO., ARCHITECTS, CEDAR RAPIDS, IOWA.

THIS is the first fireproof building of any size and the first business building over four stories high in the city. The dimensions on the ground are 30' x 140'. The height from sidewalk to parapet wall 85' and to top of flag-pole 115'. There are a basement and six stories. The material for the exterior facing is Sioux Falls purple jasper for the first two stories, with polished red-granite pilasters at sides of entrances and supporting the corbelling of angle octagon. The moulded belts, bases and carved capitals of the first two stories are of terra-cotta of the color of the cut jasper, the remainder of the two stories rock-faced stone. Above the belt at the line of the third-story sills, the facings are red St. Louis brick with moulded red brick, red terra-cotta for cornices, belts, panels and trimmings. The octagon on the angle of the building is treated so as to form a shallow balcony on the sixth story, its roof to be covered with Spanish tiles. The Third Avenue and Third Street side and the alley end are of the same material and finish.

The main entrance to the building is through an archway on the Third Street front. In the basement between this entrance and the front are two large rooms suitable for offices. These both have outside entrances from an area on the street-side of the building and one room has an inside entrance and a vault. The end of the basement toward the alley will be used for machinery-rooms and store-cellars. Large vaults extend under the sidewalks along this end. The bank will occupy a space on the first floor, extending from the entrance archway on Third Avenue to the corner of Third Avenue and Third Street. The bank-room will have an entrance from the main hall which leads in from Third Street side and also an entrance directly from Third Avenue. The banking-room has steel-lined vaults for its own use and for safety-depositors' use and a storage vault. At the end of the building toward the alley is room for two stores or one single store: having show-windows toward the alley, or post-office place and two large show-windows on Third Street.

An elevator runs up from the central entrance with stairs around



it. Each floor above the first, except the sixth, is divided into about ten suites of offices. Two offices on each floor have vaults, and there is also a general vault on each floor.

Toilets are arranged on each floor. Each suite of offices have arrangements for water in them. The sixth floor will be divided, for the present, into two large rooms. The general construction will be solid and substantial. The floor is of steel, corrugated iron and concrete, known as "Common-sense Floor Construction," the floor boards being the only wood. The partitions will be mackolite fire-proof material. Interior finish is to be of oak.

A fire-escape will be provided at the end of the building with openings off of each floor at the end of the corridor.

The main entrance-hall will have walls faced with enamelled brick. The bank-room will have a marble wainscot and marble mosaic floor, as will also the toilet-rooms.

The cost, complete, will be about \$75,000.

**EVANGELICAL LUTHERAN CHURCH, JOHNSTOWN, PA. MR. J. A. DEMPWOLF, ARCHITECT, ERIE, PA.**

This church, at the corner of two principal streets, is now nearing completion and will be occupied during the holidays. The basement walls are built of local dark-buff stone, laid broken-range, pointed in colored mortar and harmonizing with the superstructure, the walls of which are built of red bricks, ample use being made of another local stone of a light-buff color for trimmings; the roof is covered with blue slate. The spacious interior is finished in hardwood and the angular concave ceiling ranging with the roof timbers is divided into panels by heavy ribs and pierced by ornamental ventilators. The various apartments of the building are heated by two powerful combination furnaces. The entire cost including seating, stained-glass, carpets, etc., is \$21,500.

**HOUSE OF FRANCIS A. FOSTER, ESQ., WESTON, MASS. MR. JAMES T. KELLEY, ARCHITECT, BOSTON, MASS.**

The house is situated in a 50-acre park on a slight eminence between two high hills. From the terrace there is a distant view of the Blue Hills. The house is of delicate cream brick colored with terra-cotta trimmings of same color. The finish of the interior is carried out in the dignified sixteenth-century Italian style.

**DESIGN FOR THE MINNESOTA STATE-HOUSE SUBMITTED IN THE SECOND COMPETITION. MR. CYRUS F. DEAN, ARCHITECT, ERIE, PA.**

**STUDY FOR A GROUP OF FOUR HOUSES ON 86TH STREET, NEW YORK, N. Y. MR. GEORGE E. WOOD, ARCHITECT, NEW YORK, N. Y.**

[Additional Illustrations in the International Edition.]

**THE SOUTH LOUNGING-ROOM OF THE METROPOLITAN CLUB-HOUSE, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.**

[Gelatin Print.]

A CORNER OF THE SAME.

[Gelatin Print.]

"MASTER BUNBURY." AFTER SIR JOSHUA REYNOLDS.

It could not be expected that Reynolds's portraits should always escape adverse criticism. Mr. Ruskin having said that the painter was more regardful of dignity than of nature, or something to that effect, and that the peculiarity was particularly observable in the portraits of children, it is too commonly taken for granted there are grounds for the objection. Reynolds was not always converting his little subjects into *Infant Samuels* and *Singing Angels*, although he may not have suggested they were all prone to mischievous ways. His "Master Bunbury" might be a boy belonging to the humbler classes of the rural population, for there is nothing exalted about him, and he is not able to pose. That Reynolds considered the portrait was one of his happiest efforts is evident, from the jealous care with which he guarded it in his studio for his own enjoyment. In his will he bequeathed it to Master Bunbury's mother, and it continues to be the portrait by the painter which is the least known to the public.

**BOARD ROOM P. & O. STEAM NAVIGATION COMPANY'S OFFICES, LEADENHALL STREET, E. C., LONDON, ENG. MR. T. E. COLL-CUTT, ARCHITECT.**

[The following named illustrations may be found by reference to our advertising pages.]

LA PORTE DU PONT, MORET, SEINE-ET-MARNE, FRANCE.

**DETAILS FROM AN OLD HOUSE IN SOMERVILLE, MASS. MEASURED AND DRAWN BY MR. FRANK C. ADAMS, BOSTON, MASS.**

OLD HOUSES IN ENGLAND AND ON THE CONTINENT.

COLONIAL HOUSES.



**BOSTON, MASS.—** Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt: at the Museum of Fine Arts.

Paintings from the Paris Salons of 1895: at the Jordan Art Gallery, 450 Washington St.

Pictures by Ross Turner: at Doll & Richards's Gallery, 2 Park St., opens January 16.

Loan Exhibition of Pictures of Merchant Vessels: at the St. Botolph Club, until January 11.

**CHICAGO, ILL.—** Paintings by Robert W. Vonnoh, also Tapestries lent by Charles M. Foulke: at the Art Institute, until January 15.

**CINCINNATI, O.—** Paintings of the "Glasgow School": at the Art Museum, January 5 to February 2.

**MINNEAPOLIS, MINN.—** Exhibition of Posters: at the Studio Club, 719 Hennepin Ave., January 6 to 15.

**NEW YORK, N. Y.—** Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures: at the Metropolitan Museum of Art.

Fourteenth Autumn Exhibition of the National Academy of Design: December 23 to January 11.

Water-colors of Constantinople, Holland and Venice, by F. Hopkinson Smith: at the Avery Galleries, 368 Fifth Ave., January 6 to 18.

Exhibition of Japanese Paintings and Color Prints: at the Fine-Arts Building, 215 West 57th St., until February 5.

Paintings by Maxime Maufra: at the Durand-Ruel Gallery, 380 Fifth Ave., January 8 to 22.

Exhibition of Society of Beaux-Arts Architects: at the Architectural League Rooms, Fine Arts Building, 215 West 57th St., January 16 to 18.

**PHILADELPHIA, PA.—** Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts: opens December 23, closes February 22. The Architectural Section of the Exhibition closes February 1.



**THE CHICAGO DRAINAGE-CANAL.**—Probably the most important and perhaps the most stupendous piece of engineering now in progress is the Chicago drainage-canal. That statement is strong, but I think it is essentially correct. As is well known, the waters of the great lakes of Superior and Michigan once found their way to the sea by the Mississippi valley and Gulf of Mexico. Then came a slight upheaval of the limestone crust, and a simultaneous subsidence of the lake basin, so that between Lake Michigan and the Illinois River, a tributary of the Mississippi, there was a ridge, or, as it is now known, a "continental divide" some thirty miles wide, composed of hard clay, glacial drift, the remnants of a great terminal moraine, and solid limestone rock. This continental divide bars the way between Chicago and the Mississippi valley. To get over or through that divide has been the sewerage problem of the last fifty years. The canal naturally divides itself into three general divisions: The first, of thirteen miles, beginning at Chicago, is known as the earth division, where the channel is cut through hard, compact clay, with a light deposit of alluvial or prairie soil on the top. In this division the channel is to be, when completed, 202 feet wide on the bottom, with sloping sides of "two to one." The second general division is known as the glacial drift, some six miles in length, through sand, clay, hardpan and boulders of granite, sandstone, quartzite and conglomerate. Some of the boulders weigh 100 tons each, and nearly all belong to the Lake Superior region. Following this is the third, or rock division, nine miles in length. In this section, after removing a light surface soil, the cut is through solid limestone rock, whose surface is plainly and in some places deeply marked by glacial action. About midway in the length of the canal it met the course of the Des Plaines River, which comes down from Wisconsin on the crest of the broad flat top of the continental divide. The distinguishing peculiarity of this stream is the fact that in summer it is nearly dry—all its waters could easily flow through a six-inch pipe. In times of melting snows and heavy rains it discharges at the rate of 800,000 gallons per minute. Provision must be made to keep these waters out of the canal, no small task, as river and canal run along side by side for at least a dozen miles. Hence a new channel had to be cut for the river through glacial drift and limestone rock, a distance of thirteen miles, nineteen miles of banks or levees built, and a dam or spillway, nearly 400 feet long, of solid masonry, as a safety-valve for times of extra-high water. The work of construction began in September, 1892, and the contracts were all to expire April 30, 1896, though most of them have recently been extended a few months. The total length of the canal will be twenty-eight miles—thirteen in earth, six in glacial drift, and nine in rock,

solid limestone. The work of excavating began on the south branch of the Chicago River, one mile from the lake, and the estimated cost is \$1,000,000 a mile, or a total of not less than \$30,000,000. The average depth of the water in the canal will be twenty-four feet, and it will deliver into the Illinois and Mississippi Rivers 300,000 gallons of sewage per minute so thoroughly diluted as to be perfectly harmless, and this amount can be increased to 600,000 gallons per minute, affording ample sewerage facilities for a population of 3,000,000. In many places along the solid rock and glacial drift, as well as in the earth divisions, heavy retaining walls of stone, laid in hydraulic cement, are built, in all about 400,000 cubic yards. If the rock and earth excavated from this canal were deposited in Lake Michigan, where the water is forty feet deep, it would make an island one mile square rising eight feet above the water-line. — *Correspondence Springfield Republican.*

**MODEL LODGING-HOUSES IN GLASGOW.** — At the meeting of the Glasgow Philosophical Society recently, Bailie Chisholm read a paper on "The History and Results of the Glasgow City Improvement Trust." The inception of the Glasgow City Improvement Trust, he said, was partly coincident with and partly consequent on the growth of public sentiment in the direction of sanitary and hygienic reform which had distinguished the second half of the present century. The rapid and marvellous rush of people from the country districts to our great cities during the period remarked upon found their city authorities all but unprepared. In the centre of the city the people came to be crowded together in such a way that the district was a seat of disease and crime, a hotbed of pollution and vice. While officialism left this state of matters unheeded, fortunately private philanthropy stepped in to lessen, if not to remove, a hideous blot from their midst. It was not until 1865 that the Corporation moved in the matter, and in the following year the City Improvement Trust bill was passed into law. The trust had not only improved the streets by widening them and opening them into squares, but had erected in addition to dwellings for the poor in different parts of the city, seven lodging-houses, with accommodation for upward of 2,000 lodgers, and these lodging houses were a great and unmixed blessing to those who used them, while since their erection, the old pestilential lodging-houses had disappeared from their midst. There were also in course of erection a family home or *crèche*. The building of tenements by the Trust was in a manner a last resort. The sites as cleared by the Trust were not taken up by builders, and the Trust was thus forced into building itself, and, exclusive of tenements in course of erection, it now owned considerably over 1,000 dwellings, accommodating nearly 6,000 people, at rents varying from £5 to £20 or £25. It was said that they were merely shifting the very poor and the vicious from one part to another. That was not true. In sweeping the breeding styes of vice away they had given health of body and cleanliness of life which previously did not exist, and, if other proprietors would follow it, the social and domestic amenities of their poorest citizens would in a very few years be further improved. The Trust had expended altogether on lands and buildings £1,955,506, and on the erection of buildings £231,000, giving a total of £2,186,506, and deducting land sold or leased, amounting to £1,072,000, this left a balance of £1,114,506. The heritable property of the Trust was valued at £891,161, showing a deficiency of £423,144. The total cost to the rate-payers during thirty years — that is, the amount obtained by assessment — had been £593,079 16s. 6d., against which they had the Alexandra Park, 100,000 yards of ground thrown into streets and squares, and more than £100,000 expended in covering the Molendinar and Camlachie burns. The charge made against the rate-payers might now be said to have ceased, as the operations were self-supporting. — *Edinburgh Scotsman.*

**LABROUSTE AND THE ACADEMIE DES BEAUX-ARTS.** — In the year 1827 a scholar of the Ecole des Beaux-Arts was sent to the Académie Française in the Villa Medici, at Rome, to pursue his studies there for five years at the expense of the Government. This scholar was Henri Labrousse. While in Italy his attention was directed to the Greek temples of Pæstum. Trained, as he had been, in the strictest academic architecture of the Renaissance, he was struck by many points of difference between these temples and the Palladian formulas which had hitherto held despotic sway over his studies. Labrousse, on his return to Paris, surprised the grave professors of the Academy — Le Bas, Baltard, and the rest — by presenting to them as the result of his studies, carefully elaborated drawings of the temples of Pæstum. Witnessing, with pious horror, the grave departure from their rules contained in the drawings of their former favorite, they charged him with error even as a copyist. True to their prejudices their eyes did not penetrate beyond the outward type, and they at once began to find technical objections. They told him, never did such an absurdity occur in Classic architecture as a triglyph on a corner. Palladio and the Italian masters never committed such an obvious crime against propriety, nor could an instance be found in all Roman antiquity. It was in vain that poor Labrousse upheld the accuracy of his work, and reminded the Academy that among the Roman models no instance had been found of a Doric corner — that this corner occurred only so ruined that no corner was left for examination, or in the grand circumferences of the Colosseum and Theatre of Marcellus, where, from the nature of the case, no corner could be. The professors still maintained the integrity of their long-established ordinances, and, to disprove the assertions of the young pretender, even sent a Commission to examine the temples in question. The result was a confirmation of the fact, the ridicule of Paris, the consequent branding of the young artist as an architectural heretic, and a continued persecution of him by the Ecole des Beaux-Arts. — *The Architect.*

**CHOLERA AND THE WELL OF ZEM-ZEM.** — The holy well of Zem-zem disputes with the black stone built into the wall of the Kaaba the honor of being the most sacred thing in Mecca, and some authorities hold that it, rather than the black stone, is the original cause of Mecca's

becoming a holy place in the eyes of the old heathen Arab tribesmen. Its perennial supply is a specialty, and, as the water is slightly brackish, containing several alkaline constituents, it may rank as a mildly aperient mineral spring. One of the chief duties and privileges of the pilgrims is to drink, to drink often, and as much as they possibly can, of the holy water. It has of late been assumed that the holy well is itself a source of infection, and a deadly centre for the distribution of cholera poison; but Dr. Snouck Hurgronje, who spent six months in Mecca in 1885, in the successful guise of a pilgrim, zealously denies this. From an analysis of the water, as well as from consideration of the soil, climate, situation and sanitary arrangements (such as they are) of Mecca, expounded in a paper read to the Geographical Society of Berlin in 1887, he argues that no dangerous organic poison, still less the cholera bacillus, is present in the water; and, though the sacred enclosure, like the rest of the narrow valley in which Mecca stands, is liable, on the rare occasions when heavy rain falls there and on the hills around, to be partially flooded for a time, he holds that the high and solid wall of masonry round the mouth of the well is sufficient to prevent contamination by surface water. Further, the pilgrims, clean or unclean, have never direct access to the well; only the established officials attached to the well are entitled at any time to draw its water, and this they give to the pilgrims for a duly exacted fee. — *Chambers's Journal.*

**SCREWS IN STONE-WALLS.** — A Dusseldorf engineer, knowing from experience that wooden dowels for the purpose of securing screws in stone are apt to weaken the walls and do not afford the desired solidity, has devised an ingenious method of obtaining a firm anchorage. For this purpose a wire of suitable thickness is coiled on to the screw, so as to follow the threads of the same and to form a kind of screw-nut. The coiling may commence near the head or thick end of the bolt and proceed toward the point by laying the wire into or between the threads, so as to touch the bottom of the same, the section of each screw-thread being preferably triangular or trapezoidal and the core of the screw conical (similar to a wood-screw). After arriving at the point of the screw the wire may be wound backward over the helix already wound on, but with a steeper pitch, so as to leave wider interstices between consecutive convolutions of the wire. After the wire has been laid on so as to form a nut, and then the screw withdrawn, the nut or wire-coil is introduced into a hole which has been drilled or otherwise formed in the wall for this purpose, and which is slightly wider than the diameter of the nut measured over the outer layer of the wire, after which the interstices are filled up with plaster-of-Paris, cement, or similar binding material in a plastic condition. When the said binding material has become sufficiently hard and firm, the screw bolt which has served as a core, or another screw bolt having the same diameter and pitch, is screwed into the wire-coil, and may now be screwed out and in repeatedly without damaging the wall, because the wire serves as a screw nut, which is secured to the stone or wall by the cement or other binding material. — *Philadelphia Record.*

**THE CHICAGO CHURCH.** — The other day we went by a new building, which, to our practised eye, could be nothing else than a pumping-station. "That's the new branch of the water-works," we said, very oracularly. "No such thing," bluntly responded the friend walking with us. "That is a gymnasium." He proved his point by the windows, high up and small, and evidently intended to prevent people looking in, or out, for that matter. We proved our position by the smoke-stack and the "altogether" of the edifice. Presently we asked a little street-urchin whom we met, and he said: "That? Why, that's the new — Church." And so it proved to be. It was, one sees, a sign of the times. The fact is that some of our denominations, at least some of the preachers in them, have so far lost sight of their aim that the confusion has got into their very bricks and mortar. What they don't know is so much more prominent in their preaching than what they do know that the church has no longer a font, an altar, or a spire. When the pulpit ceases to present heavenly themes, there is no reason why the building should be distinguished from secular markets, or banks, or cattlesheds. It will be needed for one or the other of these uses before long. — *The Chicago Interior.*

**ELECTRIC HEATING OF A MONASTERY.** — One of the most interesting developments of the utilization of electric power from the works at Niagara Falls is a heating plant which has recently been put into the Carmelite Monastery near there. Electricity will be entirely used for cooking, and for all power purposes, as well as for all laundry work. The cost of heating buildings by electricity has not as yet been reduced to such a figure as will cause it to enter into active competition with other methods, but its effect and cost in the monastery is watched with the greatest interest by all interested in electricity. The power is now used pretty generally for heating tramcars operated by electricity, while it possesses many advantages over any other system, which more than counterbalances the increase in cost. It is also generally used in laundry work for heating irons. The extension of the power for heating purposes, however, is only a question of time. — *Invention.*

**CHOLERA GERMS IN IMPORTED PLANTS.** — The importation into the United States of plants from China and Japan is forbidden. The reason for this is the prevalence of cholera in the Asiatic countries. Nearly all of the plants that come across the Pacific are shipped in pots and in their native soil. Nothing absorbs and holds the germs of disease, especially in an epidemic, so well as the earth. — *N. Y. Evening Post.*

**"GOLFERS."** — London has invented a new and expressive bit of artistic slang. It has christened the followers of the impressionist cult "golfers," because they try to do their work with the fewest number of strokes. — *The Collector.*

Entered at the Post-Office at Boston as second-class matter.

JANUARY 18, 1896.



**SUMMARY:—**

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**P**ROFESSOR F. W. CHANDLER, of the Architectural Department of the Massachusetts Institute of Technology, has been appointed Consulting Architect to the Mayor of Boston. Under the amended charter of the City, passed last year, it is the duty of the Mayor to approve all plans for municipal buildings, as well as the selection of architects for them; and Mayor Quincy has selected Professor Chandler as his professional adviser in these matters. Incidentally, Professor Chandler has, for the present, been requested to supervise the building work now going on for the city School Board. It appears that the School Board, although invested by the new charter with a certain control over its building operations, is not legally a Department of the city government, and the Mayor has found it necessary to transfer its building work to the City Engineer, for whom Professor Chandler is to act as expert. It is hardly necessary to say that the city could not have a professional adviser better qualified by training and experience for such duties, and it is a satisfaction to see the connection between the Institute and the community, which the labors of Professor Swain, as expert to the Railroad Commissioners, and as a member of the Subway Commission, of Professor Sedgwick, as expert to the Board of Health, and of others, have already made so valuable, made still closer by enlisting the head of the Department of Architecture in the service of the city.

**D**R. JOHN S. BILLINGS, the well-known writer on ventilation, hygiene and medical topics, and now Director of the Department of Hygiene in the University of Pennsylvania, has been appointed Superintendent-in-Chief of the Consolidated Library of New York, and has accepted the appointment. Dr. Billings is already distinguished in library science, through his "Index-Catalogue of the Library of the Surgeon-General's Office," published in 1881. It is to be hoped that the community will not lose, through Dr. Billings's transfer to his new duties, the benefit of his experience, and, especially, of the clear and sensible style in which he imparts his knowledge to others. To our mind, Dr. Billings has long been the model of a scientific writer on practical subjects. Every architect knows how difficult it is to sift the valuable part out of books on ventilation, hygiene and similar topics. Even where the reader is not met by glaring errors in the statement of natural laws, like that, for example, contained in the very first sentence of an English work that we once saw, which began by saying that

"Air is warmed by rays of heat passing through it," he is likely to find that the writer has some pet theory, or device, his devotion to which is so evident as to cast suspicion on his fairness in presenting facts. With Dr. Billings, nothing of the kind is to be feared. The military man, above all others, is trained to deal with facts, and let theories take care of themselves; and Dr. Billings, as an accomplished scientific man with a military training, commands, we are sure, the confidence of the professional public in the highest degree.

**A**N effort is being made to apply to the art-matters of the nation the principle which has already been adopted by most of the larger cities, of giving to expert advisers some sort of control over the choice of statues, monuments and other artistic works executed for, or in behalf of the public. The Government of the United States has, of late, had too many other things to do with its money to indulge in the purchase of many pictures or statues, or the erection of important monuments; but the time will soon come when something can be spared, with the approval of the whole community, for such purposes; but, meanwhile, the ordinary administration of the public business requires the production and circulation of coins, postage stamps and other modest works of art, whose small size need not prevent them from being beautiful. That these should, not only for the credit and glory of our country, but for the education of our people in such matters, be as beautiful as possible, every one will admit, and the way to make them so, as well as to secure the highest excellence in the more ambitious works which are to lend dignity to the central authority of the Republic, is certainly to ask the judgment upon them of the people who have had the most opportunities for seeing and studying such things, and are best able to make comparisons, and to recognize meritorious originality. It is not likely to be very difficult to persuade the members of Congress of the truth of this proposition, but some one must undertake the task of presenting it to their consideration, and it is for the performance of this task in a more efficient manner that it is proposed to organize a Public Art League of the United States, including persons of influence in artistic matters all over the country, by whose coöperation and counsel the present practice of the Government in regard to such things may be changed for the better. Such a body has certainly a promising field of usefulness before it, and, even if its labors should not be immediately productive of the desired result, they may, indirectly, by the opportunity which they will give for uniting the artistic thought of the whole country, be of great service in the development of an art truly American.

**O**FTEN, when we have seen a toil-worn laboring man or woman stop and give out of his or her nearly empty pocket some few coins to a street-beggar, we have felt that if only the wealthy would bestow on the needy the same relative proportion of their income, the world would be a cheerier place than it is. The thought was a merely impulsive one, for it is a matter of common knowledge that the wealthy really do make a proper distribution of their income, and that the sum actually bestowed in charity each year is vast beyond comprehension. Some men do this gracious act as a matter of principle and justice, coldly and uninterestedly, others do it with a warm and heartfelt human sympathy which doubles the value of the gift. In this latter class, we believe, rightfully belonged Martin Brimmer, one of the most respected of the influential citizens of Boston, whose death this week closes a useful career. Possessor of an ample fortune, which was held in trust for him throughout life, he was willing to use a liberal part of the income from it not only in works of charity, but in all those undertakings which a high-minded, highly-educated man may enter into in the hope that they may benefit his fellow-citizens and mankind at large. A graduate of Harvard College, and in later life more than once elected an overseer, he always took an active interest in its affairs, but the interest which absorbed most of his time and thought was the Boston Museum of Fine Arts, of which he was one of the founders and from the first, we believe, the President of its Board of Trustees, and always an active, if somewhat conservative, promoter of its best interests. Because of the position he held at the Museum of Fine Arts he was a member of the Art Commission of the City of Boston and shared in the good work that

useful body has done for the city. A member, too, of the Massachusetts House and Senate at several different periods, he at various times in his life has performed more of the duties of good citizenship in more and more varied ways than the ordinary possessor of wealth usually thinks of concerning himself with. As a writer, he preferred to write for "private publication," and the only work by him we know of as regularly published is a series of "*Three Essays on the History, Art and Religion of Ancient Egypt*." The only blame we ever heard applied to him was apropos of his willingness to live in a house which is, externally, the last expression of a Neo-Grec nightmare.

SO much interest is just now taken in the new illuminant, acetylene gas, that it is desirable for architects, who are likely to be often called upon for information in regard to it, to make themselves familiar with its properties. Most people know that acetylene is a gas, of the class known as "heavy hydrocarbons," and containing equal weights of carbon and hydrogen. Ordinary coal-gas usually contains four or five per cent of this and the allied heavy hydrocarbons, which give it most of its illuminating power; while gas from cannel coal contains about twice as large a proportion, and burns, accordingly, with a flame about twice as brilliant as that from ordinary gas. By itself, acetylene burns with an intensely brilliant flame, which gives off a large amount of smoke, unless it is supplied with a strong current of air, by means of a chimney, or some other device. Until within a year or so, acetylene was derived only from the distillation of coal, and was with difficulty separated from the other products so derived. Now, it is found that, by heating powdered coke and lime together in an electric furnace, the oxygen of the lime can be driven off, and the remaining elements combined into solid calcium carbide, which, when heated with water, is again decomposed, the oxygen of the water uniting with the calcium to form lime, while the hydrogen combines with an equal weight of carbon, and escapes, in the form of acetylene gas. As calcium carbide can be produced at a cost of about one cent per pound, and each pound, when mixed with the requisite quantity of water, gives off from four to five cubic feet of acetylene gas, the latter considering its great illuminating power, is cheap in comparison with ordinary coal gas, and its cost is, in practice, reduced still further by the sale of the oxide of calcium, or lime, which remains after the acetylene has escaped, and forms a marketable product.

WHETHER acetylene will ever replace ordinary gas for illuminating purposes is, notwithstanding its advantages, by no means certain. Its tendency to give a smoky flame can easily be counteracted by chimneys, and the poisonous and explosive qualities attributed to it are, if anything, less notable than those of ordinary coal-gas; but the vast quantity of residuum left from its manufacture from calcium carbide and water must be a serious difficulty in working on a large scale. Roughly speaking, the production of a thousand cubic feet of acetylene involves disposing of a barrel of residuum; and, although the residuum is, at present, salable, it is hardly likely that the market could absorb the millions of barrels of lime that would come from the general substitution of acetylene for coal-gas, under the present process of manufacture. Perhaps the process may be improved, so that the proportion of residuum may be less; or the acetylene may be used simply to enrich ordinary gas. In any case, it is a very interesting substance, and the process by which it is prepared is one of the most remarkable discoveries of modern chemistry.

ANOTHER property of acetylene gas, which it is well for intending consumers to bear in mind, is that it cannot be used in brass fixtures, as it rapidly corrodes brass, as well as bronze and copper, forming with them a compound liable, under certain conditions, to explosion. Experimenters with the gas use, in consequence, burners and fixtures of iron, lead or tin, or, sometimes, of brass heavily coated with tin. Naturally, with a gas so highly carbonized, the burners should be made with an orifice in the shape of an extremely narrow slit, so as to give the air as free access as possible to the flame. The companies now preparing to put acetylene on public sale in this country propose, as is reported, to deliver the gas compressed in cylinders. Under what pressure it is intended to furnish the gas we do not know; but it is worth while to remember that, under a pressure of about seven hundred and

fifty pounds to the square inch, which is by no means beyond the resistance of a good steel cylinder, it becomes, at ordinary temperature, a liquid; and, as it occupies in that condition less than a thousandth part the space that it requires in the form of a gas, an immense saving might obviously be made in the cost of storing and transporting it, if means could be devised for reconverting it gently and safely, as required, into the gaseous condition.

WE have received a letter from an officer of an insurance company, saying that there seems to be a difference of opinion in his profession on the question whether a building is safer against fire with an elevator running through open hatchways in the several floors, or with the shaft in which it runs enclosed with wooden sheathing. As no one, so far as we know, has ever voluntarily stayed long enough in a building where flames were rushing up the elevator-shaft to write down his observations, we are unable to give any definite conclusions on the subject. The disposition of the insurance companies in this neighborhood is, or was, while elevator-shafts of either description were permitted, to prefer the wooden enclosure, and, although this furnishes additional fuel to the fire, there can hardly be any doubt that it would, for a few moments, at least, keep the flames in the shaft from reaching inflammable goods in the several stories, and thus perhaps give time for the fire-engines to arrive. As with so many other questions of the kind, the answer would be modified by circumstances. The character of the goods in the building; the nearness of a fire-engine station; the height of the shaft; the provision of a skylight over it, and many other things, would modify the advantages or disadvantages to be derived from the use of such an enclosure. We should ourselves be disposed, under the conditions prevailing in most general warehouses, to advise its adoption, but we should also advise wire-lathing and plastering it, at least on the inside. However, we should be glad to have the opinion of others on the matter.

M. CHARLES LUCAS continues in *La Construction Moderne* his interesting historical studies of the personal affairs of noted architects. Among other things, he recalls the savage sarcasms which Boileau directed at Perrault, for whom, probably on account of his family connections, he seems to have cherished a peculiar hatred. Perrault, as all students know, was a physician. He was a scientific man also, and a brilliant mathematician, and the example of another medical man of his time, Louis Savot, who, although physician to the King of France, found time to prepare and publish a book, entitled "*L'Architecture française des Bâtimens particuliers*," appears to have led him to the study of architecture as an accomplishment, and he published several treatises on the subject, including a translation of Vitruvius. His brother, Charles Perrault, the renowned author of "*Perrault's Fables*," had been attached to the train of the minister Colbert, as general assistant adviser in matters of art, science and literature. Through his influence with Colbert, apparently, the doctor-architect was appointed, after the plans which Bernini had made for the east front of the Louvre had been finally abandoned, architect-in-chief for this part of the building, and, in this capacity, designed and carried out the Colonnade which still forms one of the architectural wonders of Paris.

HIS appointment aroused Boileau, who had just come off second-best from a literary encounter with his brother at the Academy, and he revenged himself on the latter by an epigram on the new architect, concluding with the lines,

"Our assassin renounces his vile art;  
And, with the rule and square henceforth in hand,  
Deserting Galen's doubtful practices,  
From wretched doctor turns good architect."

According to Boileau's own story, this performance drew down on him the displeasure of the minister, so that he was urged by his friends to make amends, which he did by the following squib:

"TO A PHYSICIAN."

"'Tis true, my verse once showed a famous assassin,  
Who ceased to practice Galen's unproductive art,  
And from a doctor bad became a mason good.  
But to refer to you I never did intend;  
My muse, O Perrault, knows the truth too well for that.  
You are, I will confess, a doctor bad enough,  
But you are by no means a skilful architect."



A SYLLABUS OF EARLY CHRISTIAN, ROMANESQUE AND GOTHIC ARCHITECTURE.<sup>1</sup>—VI.

## GOTHIC ARCHITECTURE.—HISTORICAL INTRODUCTION.

THE twelfth century is a period noteworthy beyond any previous one, for its great strivings and activity in the world of thought as well as in the world of deed. The political events of the period are too many and too varied for a mere cursory treatment, and, therefore, a less detailed, more general statement of the condition of the main powers of Europe will, perhaps, be of greater value for the understanding of the age.

The two foremost powers in Christendom were the Pope on the one side, and the Emperor on the other. Throughout the Middle Ages they represented the poles between which all things secular and clerical were supposed to move. The ideal of the time was the perfect harmony and mutual assistance of these powers to maintain the order of society and make peace between heaven and earth. This ideal was in so far frustrated as the prevailing feeling between the two was jealousy, prompted by the claim of supremacy each made for himself as possessor of the better order of government, and the attempt to reduce the other to a minimum of power for the sake of this claim. Both failed in making good the claim, and the final outcome was the slow weakening of their authority upon the minds of the people and the gradual breaking-down of the structure of absolute obedience, upon which their power rested. But as yet, in the twelfth century, this was apparent only in its beginning. The dream of reconciliation and general peace still maintained itself for a long time among the nations, and found expression in the works of poets and thinkers. Among the mass of the people this secret yearning for a quiet and contemplative life is shown by their devotion to the Church and her commands, and their erection of numerous and elaborate structures for divine purposes: among the higher classes, the cultivation of the arts, of learning, and of other matters of culture, bear witness to the same feeling. But the circumstances did not permit a life of peace, the times were too agitated with great moral and political questions. The struggle between the temporal and clerical powers, with all its accompanying disturbances, shook the world to its foundations; passions and ambitions were fired and let loose in civic war. The world-commanding position of Germany, which the nation took pride in maintaining as far as its means allowed, drained the very sources of its strength and vitality. France, on the other side, being politically inferior, was able to develop some of the peculiarities of the time and held an esteemed and leading position in the arts of peace, in social refinement and ideal aspiration. The awakening power of its king tended to make his court and his residence the centre of the political and spiritual life of the country. The neighborhood of Spain with the constant crusades against the unbelievers, kindled a crusading spirit in France too, a spirit that assisted in the establishment of chivalry. Warfare was one of the necessary evils of the period, but in France chivalry was not merely the spirit of conquest brought into regular service and fixed forms, but was characterized by humane instincts as well, by the spirit of law in contrast to disorder, and obedience in contrast to lawlessness. To the boundless enthusiasm which chivalry kindled in the people and the feeling of safety it created is due much of the energy and stupendous activity and striving that these times show. Another cause of increased vigor may be found in the final success of the communes in securing independence and self-government, which took place during the eleventh and twelfth centuries. Under the guidance of the rising commerce, industry and art became established in the enfranchised towns instead of in the monasteries. The clergy were still active as dispensers of favors and bestowers of commissions, but the workers were no longer monks and lay brothers, but inhabitants of the towns and cities, who for better exercise of their crafts united in certain associations called "guilds." And the relation of these townspeople and their guilds to the development of art, and especially to that of architecture, must by no means be underrated. The material forces that furthered and in some measure brought about the creation of a new kind of edifice are not only, as in the previous period, to be sought among the clergy and in the royal power, but to a great extent in the communes. Most churches of importance were situated in some town and formed a part of its entity. The king granted privileges, the temporal lords assisted very munificently, but often it was the communes, in coöperation with their ecclesiastical superior, the bishop, that impressed their image upon the architecture of the time. The bishop took the lead, the church was his, at least under his jurisdiction. He inspired the work with the peculiar sacredness due to it. He was able also to promote the undertaking by granting spiritual favors to those who joined in it. But above all, it was the communes, their artisans and masons, that executed the suggestions, realized the plans and accomplished the work, sustaining the enormous enterprise with their zeal and devotion. By the very nature of the architecture of this period, it seems to bear witness to this popular element in its creation; a breath of democracy is found in the uniformity prevailing through its huge masses from the foundation to the smallest detail.

Gothic style is entirely a French creation. The French architects, having struggled with constructive problems in the various provinces for more than two hundred years, were especially fitted to find in

what is termed "Gothic" the solution of their difficulties. This solution, however, is no matter of invention or sudden change, but was arrived at through continuous development. The previous attempts and results from the time of Roman architecture have to be taken into account. When the way was found to avoid the difficulties that had hitherto beset the architects, the development of the Gothic style within the province where it originated and the immediate neighborhood was a matter of comparatively short time.

## GENERAL CHARACTERISTICS OF GOTHIC ARCHITECTURE.

*General Points.*—The distinguishing trait of Gothic architecture must be said to be construction in its most ideal form and carried to its most absolute perfection. Logic of all parts, clearness and perceptibility of the constructive thought, clothed in forms that neatly and precisely express the purpose, form the ideal striven towards and reached before many decades. Gothic structures are architectural in the best sense of the word. In this quality the style can compete successfully with the Greek, and presents in comparison with the Greek far more subtle thought, greater exaltation of spirit and more intense striving. In the Greek edifice the exterior is the one feature emphasized. In the Gothic the idea of a lofty interior is carried to its utmost, all extraordinary effort in the matter of support being thrown outside the building and embodied in the army of buttresses, in order that the interior may be unincumbered. Gothic is in the highest degree a *system*, with every other consideration subservient to the exact representation of this system.

*The Relation of Gothic to Romanesque.*—In order to explain fully the excellence of Gothic, the failure of Romanesque architecture to fulfil all the requirements of perfect construction, its transitional character, in fact, is generally referred to and emphasized. Certainly, there were enough elements hidden in the Romanesque style that could receive further development. The bulk and clumsiness of the walls, the inefficiency of the memberment, the unyielding nature of the arch and the difficult adjustment of the vault may justly be mentioned as causes of perplexity to the Mediæval builders. The growth of a new art is often most effectively promoted by the shortcomings of its predecessor. The urgent need of correcting some fault in the general make-up of the Romanesque style kept the architect on the watch for a happier solution.

But too much stress ought not to be laid on the inefficiency of Romanesque architecture as the sole cause of the creation of Gothic. The times gave rise to what may be called the elements of a scientific spirit. Intellectual interests were no longer confined to the clergy—the world began to widen to other layers of society also. A more intelligent inquiry into the reasons and causes of strange occurrences was roused by the wayfaring habit of the knights and the contentious spirit of the communes. Research could start, it is true, only in a few privileged channels, and inasmuch as the science of building was more or less a matter of general interest, investigation was centered upon this, and the riddles of the previous construction were inquired into. Architecture became a scientific pursuit and the masons were the scholars that applied themselves to it. That the discovery of the saving principle was most likely a matter of accident ought not to have much weight, since it was the utilization of the principle that taxed the builders' powers. At the same time, however, this discovery made the whole movement dependent upon its most conspicuous feature, the use of the pointed arch. If this had not been the case, but if, for example, a more rational use had been made of the semicircular arch, matters would have stood differently. In an æsthetic sense, Romanesque architecture as a style possesses not only great beauty, but material merit as well. If, by some fortunate turn of events, it had not been so abruptly pushed aside and cut short in the midst of its development, but allowed to solve its own problems in its own and perhaps an equally satisfactory way, who knows what might not have been the outcome? It might have reached a renaissance far more germane to the races whose spiritual product it was than the Renaissance that actually took place. Instead, Gothic threw the whole development of architecture in another direction, and became the brilliant but one-sided evolution of what had previously been a well-balanced growth of inner and outer agencies.

*Ground-plan.*—In Gothic work the ground-plan remains only slightly changed. The scheme of the Latin cross and of the three-aisled structure, so largely favored during Romanesque time, is still the typical form, but developed and perfected. A general process of growth can be followed from the unsymmetrical ground-plan of earlier structures, where the Romanesque type is still prevalent, up to the perfection of the Gothic cathedral (Amiens), where the parts east and west of the transept easily balance, one (choir) being a little broader, the other (nave) a little longer, while the transept protrudes just far enough beyond the line of each to maintain its separate character. The possibility of being able to vault any space by means of the pointed arch, and the consequences of this method, had much influence upon the character of the ground-plan. In the nave the rectangular compartment could be applied without disturbance, the number of supports being increased, the nave made narrower, the additional breadth supplied by means of the aisles: these are continued all around the edifice and doubled in the choir which here usually has the genuine French character as its highest development. It is composed of a polygonal apse with surrounding aisles and radial chapels (*chevet*). No crypt.

<sup>1</sup> Continued from No. 1033, page 18.

*Elevation.* — The specific Gothic character is much more marked in the elevation than in the ground-plan. Some of the characteristics of the Romanesque system, such as the three stories of the nave, are retained; but the galleries, having no longer prominence as constructive parts, are now only preserved as narrow passages (triforia), giving relief to the wall and forming means of access to the upper stories and the roofs. The nave is far higher than the aisles, in fact, higher than any nave of the previous basilical structure, and of far more slender proportions. Compared with it the aisles are only low structures of one story, although a good contrast to and emphasizing the soaring character of the nave.

In the nave the system displays itself at its best, the memberment rising in huge masses but of perfect proportion and delicate finish. The pointed arch gives the structure a singular lightness of aspect, and the proximity of the supports a character of bony strength. Light pours in through the large windows and the chief wealth of decoration is concentrated here.

In the exterior the superior height of the nave is very perceptible, as it surpasses the aisles by two stories, the constructive function of the aisles being superseded by the buttresses. Towers mark the entrances and a small lantern the choir. Of the exterior these, the buttresses and the ridge of the nave are the most conspicuous parts.

M. WERGELAND.

[To be continued.]

#### EXPERIENCE WITH PROFIT-SHARING.

**P**ROFIT-SHARING by workmen and capitalist alike is an ideal arrangement; it is but equitable. Until within recent years, the medium of wages was recognized as sufficiently accurate, so far as workmen were concerned. It was a ready method, and if at times of great prosperity there was barely equality in the sharing, the balance was probably made good during periods of commercial adversity. That, however, is now too simple a way for many people. It is true, the sordid, but almost inevitable, law of supply and demand has affected the old condition of the wage, being the principal factor in determining the selling-price, an arrangement which secured some uniformity in the profit. On the other hand, the increased competition, alike in buying materials and selling finished products, has involved a greater effort in labor or in skill, perhaps, also, in business acumen on the part of the employer, so that his share is, therefore, a greater and a less easily determined item. The introduction of machinery, too, has altered conditions; but, withal, there is no question that the wage of the worker has distinctly improved. We might say, in view of the return to capital in industrial companies whose accounts are made public, that the men have shared more largely in any improved result in recent years. Yet there is discontent; the men are ready to believe suggestions as to fabulous profits, and never consider the higher merits of present-day management, while the employers are anxious to raise the slight margin of profit from production alone by more efficient use of their plant; hence, the promulgation of new methods of profit-sharing, with a view to stimulate the men, if not also to promote contentment. Nothing seems simpler than the arrangement of a scheme; yet of the many who have tried, few have succeeded, and the cause of failure is not infrequently due to the very conditions which have prompted the change.

Like most novel proposals in social economies, that of profit-sharing was welcomed six or seven years ago as a panacea for all ills—for low wages, for slow and inefficient work, and thus for the increase of production from the same plant and with the same permanent charges. The experience of years is told in part by a report lately issued from the Labor Department of the Board of Trade. It can scarcely be said, after careful perusal of the report, that hopes have attained fruition. In the first place, profit-sharing, as first conceived, has been found almost impracticable, and where possible has been without appreciable result. Only the most sympathetic expected that it would be otherwise. The conditions required a mental, if not a moral, training; which the weekly or fortnightly wage did not inculcate. Reward quickly follows effort in the case of the ordinary wage; in the other it is so remote as to prove no incentive, except to the more thoughtful and energetic workman. And after a time even his enthusiasm is affected by the lack of interest of his neighbor. "To a man living from hand to mouth, the hope of receiving a reward at some distant period offered but little inducement towards higher efficiency." That is the view suggested by experience to Mr. Towne, of the Yale & Towne Company, Stamford, Conn. It was thought that this lack of interest in deferred results would be less operative in small works; but we read that in an English lead-works employing twenty persons, the system was adopted in 1893, when the bonus was 10 per cent; in 1894 it was 1.65 per cent. The basis was the same; the difference "is accounted for only by the fact that the men did not work so hard." That is the view of the firm in question. Again, in a skin-dressing factory the departments were divided, and the amount of bonus was based on the saving in production in each. Thus in "dressing," the men earned 7½ per cent, in dyeing 10 per cent, in finishing 5 per cent and in fellmongering about 8 per cent in the first year (1890). But since then no bonus has been earned. In regard to the effect of the system, the firm write that "the result was fairly satisfactory, but, in consequence of the system possibly, one department was over-

jealous at first of another's large bonus, and the indifference subsequently was rather marked."

This element of jealousy in cases where profit is credited to separate departments is most pronounced in individual work or in small groups, and is almost fatal to any scheme, for it begets the feeling that there must be unfairness in an arrangement which admits of one man earning a larger bonus than another. It is idle to offer explanations to the men, since a full statement cannot be given. The disclosure of a firm's financial affairs to the workmen would be injudicious, and this fact tends to make any profit-sharing scheme a one-sided arrangement. On the one hand, faith is commanded; on the other, a strong will against temptation. But to counterbalance this there is the still more unsatisfactory one-sided arrangement that all profit is shared, while the loss is borne by the employer. This loss may be due to many causes, even connected with the production, apart from material and selling. The skin-dressing establishment attributed the stoppage of bonus to depression in the principal market reducing production, while fixed charges remained constant, and although at one time they hoped to pay bonus, they subsequently departed from the scheme, writing, "The irregular quantity of work that had to be done, and the consequent variations in cost, have made it practically impossible to continue our scheme; since its stoppage we have found that slightly increased wages have produced as good results; the men prefer a certain sum weekly to an uncertain bonus." Instances might be multiplied to show that the division of the year's profit has had little effect in large establishments, because reward is deferred, activity and easy-working share alike, and where departments work under separate schemes jealousy assists the general disappointment.

Many who anticipated failure from such causes, and were yet satisfied that some incentive could be made to increase production, put in operation alternative schemes. The same idea of increasing production without increasing the cost proportionately underlies practically all schemes, and thus many trade unions do not look on the alternatives with any better favor. Some of these are known as gain-sharing schemes. This is not quite synonymous with profit-sharing, for there may be no profit earned, yet gain may be shared. The gain is on a standard cost of production including labor, an arbitrary fixed sum for the quantity of raw material used—probably a mean of the price for several years—incidental supplies, cost of power, water, light, cost of renewals of plant and the cost of superintendence. Immediate fluctuations in the price of material or selling may involve profit or loss. If the standard cost be 17., and the actual cost 18s., the gain is 2s., divided equally between employers and men. At first sight this seems a feasible scheme, and was adopted in 1887 by the Yale & Towne Manufacturing Company. It had several recommendations. In the first place, the reward was paid monthly. It was based on a liberal scale of standard costs, and was put into operation for five years, both of which were regarded as essential conditions to encourage the men to do their best, in the knowledge that a big bonus did not involve a speedy decrease of the standard cost. Moreover, standard costs were determined for such small products that individual exertion carried its own reward in most cases. The rate of dividend was from 2 to 12 per cent on the wages, while at the same time the cost of production was proportionately decreased, for half of the gain went to the employers, and the turn-out was greater, while establishment charges remained constant.

It will be at once apparent that the plan is limited in its application practically to standard productions, almost to such work as is repeated indefinitely with few alterations. Where the product is a specialty, and a man or boy is kept at one machine turning out, say, bolts or studs, it is easy to determine the standard price. But even the Yale & Towne Company, enthusiastic as they were at one time, were forced to replace the system with a well-organized piece-work system, because with groups restricted even to twenty, the want of uniform individual effort defeated the object. The chief reason, however, was that the products were of such infinitely varied character that it was found better to have a system where each man was directly interested in his work. "The men seem better satisfied with the piece-work system," and the company get "decidedly" better results than under the gain-sharing system. To quote again from Mr. Towne, "The cost of articles has been greatly reduced; but it must be stated that this is probably due to the fact that piece-work has taken the place of day-work, and that the dropping of gain-sharing has made but little difference one way or the other." The point is that piece-work is more effective and more acceptable to the men than gain-sharing.

Another variation to the same end was adopted by Mr. F. A. Halsey in Canadian works for the manufacture of rock-drills, air-compressors and general mining-machinery. In this system the time required to do a given piece of work is determined from previous experience, and the workman, in addition to his usual daily wages, is offered a premium for every hour by which he reduces the time for the same work. As the premium is less than the wage for the additional hour's work, there is economy. Thus, if a piece of work which formerly required ten hours at 8d. per hour wage were done in nine hours, the wage is 8d. less, while the premium to workmen may be 2½d., the saving to the employer being 5½d. The rate of premium, decided upon judiciously, is made permanent for a period. Mr. Halsey's premiums are uniform—2½d. for each hour saved by a man, whose average wage is 8½d. per hour, and 1½d. to boys,

whose wage is 3½d. per hour. It will be seen that the quicker the work is done, the higher will be the aggregate premium. If the nine-hour job takes six hours, the premium becomes 7½d., the saving to the employer being about 1s. 6d. There is further gain to the employer in the greater production from the plant and for the fixed charges. Mr. Halsey used the scheme for three years and in three establishments, and is satisfied of its efficiency; but he readily admits that the conditions made for success. All the work done in the factory was repetition work, and was done single-handed, with one man only on each premium job. He believes, however, that it might be applied where small groups were engaged on one job, but the premiums would require to be higher, since the group-work does not afford "opportunities for the cultivation of individual dexterity on individual operations." This is the old evil, and with experience to the contrary, it is difficult to share Mr. Halsey's belief in efficacy, more especially as he himself did not apply the scheme to work of a miscellaneous character. The average increase of output was from 25 to 35 per cent, and the proportion of premiums was such as to make the increased earnings for the workman rather less than one-half of the savings to the company. Several others have tried the system, some failing because the time-rate was too high and the premium-rate low. But the application has been, and must be, limited to machine-shop work of small size and uniform products.

The report with which we are more particularly dealing also describes the results of Messrs. Willans & Robinson's reference-rate system, and also the Thames Iron-Works' good-fellowship scheme. In the case of the former company, the system was evolved out of the practice of paying the three directors actively engaged in the business three-tenths of the profits after 7 per cent had been paid on the ordinary capital of the company, and giving the works' manager and foreman of the erecting shop a bonus on the "gain" over the cost of each engine. In the latter case, a fine was enacted for delay in the completion of the work, a week's delay absorbing all the bonus. The system adopted now with the men is not unlike that already described in connection with other works. The labor cost of a job is calculated as the "reference rate," and is fixed for a period of years. If the amount earned as time wages (including over-time pay) in respect of this job falls below the "reference rate," then the difference is divided equally between the employers and the workmen, or the group of workmen, engaged on the job. The reference rate, as a rule, is fixed at from 5 to 10 per cent above the former average cost, so that if only normal activity be shown, the employers lose; their gain only begins when the men have earned 11.11 per cent of profit. If the men take 25 per cent less time they earn 18.75 per cent more wage per hour by reason of the bonus, while the decrease in the cost of the job to the employer is 5 per cent. In no case is the workman paid less than ordinary time wage, and should the workmen by invention improve the machine tools in the works, the reference rate is not reduced, but the introduction of new machinery and improved appliances by the owners calls for revision.

Since Messrs. Willans & Robinson confine themselves chiefly to repeat work, the conditions being almost ideal for such a system. They have standard types of engines, similar in design, with tools specially adapted for completing one operation or one part of the engine, so that in large measure the work is single-handed, and the simplicity enables them to divide the bonus weekly. Moreover, they have the greater latitude in respect that they have not to face a "cut-throat competition," as the Board of Trade Report forcibly, although inelegantly, puts it. Of their two hundred and fifty-seven workmen, one hundred and thirty-five are this year reported as earning bonus in the shops, and twenty-one on the permanent outside staff erecting engines, etc. This proportion has not differed in five years, for in 1891 it was one hundred and fifteen out of two hundred and thirteen. The system is therefore applicable to only a portion of the work, and it is interesting to quote the company's reason—that "there must always be a considerable portion of non-standard work." If that is so here, how much more so must it be in a general engineering work. In 1894 the men working on the bonus system had 10,579l. odd of wages and 1,597l. of bonus = 14.93 per cent, while the outside men had 1,957l. of wages and 117l. of bonus = 5.99 per cent. There was great variation between maximum and minimum percentage earned by individuals: in the case of the turners, from 82 to 10; pattern-makers, 57 to 6; machinists, 37 to 6; fitters, 14 to 2.75; grinders, 13 to 5.50. Of course this percentage is affected by the proportion of time engaged by individual workmen on bonus work, and here one recognizes possibilities of discontent. Only very small groups are put on bonus work, and in the foundry where the forty men work in a group, the scheme has not been successful. The reference rate was the former labor-cost plus 10 per cent, but the works' manager states that the group arrangement is "ill-calculated to promote that special efficiency which it is the object of the bonus scheme to evoke, since, while the less industrious among the members of this large group leave it to their more active mates to exhibit any special degree of efficiency, those more vigorous workmen do not care to put forth their best energies with the knowledge that their own extra zeal is likely to be, to a great extent, neutralized by the inactivity of their fellow-workers." The system is not adopted in the erecting shop; and outside, where also squad work is the rule, the gain, as we have shown, is only 6 per cent. There is profit to the employers, for Willans & Robinson quote typical examples of decreasing cost of standard articles, the 1894 cost being in some cases 15 per cent less, although in others the same as in 1891, while

they report that the system has tended to promote harmony between employers and employed, and to the exhibition of extra zeal.

This also is the end in the case of the Thames Iron-Works' scheme, which is more important, since the application is to miscellaneous work. It is called a "good-fellowship" scheme; but it is difficult to quite appreciate the difference in general principles from ordinary piece-work. When a contract is entered upon, labor values and sub-labor values are calculated by employers, foremen and workmen. For instance, in making labor values a valve forms one unit, so also the turning, facing, screwing and fitting of a scuttle. The labor value of a bulkhead door is one item. In the civil-engineering department, the labor value of plating is so much a ton; in ship-building there is one labor value for levelling, another for marking, templating, punching, rolling, erecting and sometimes also closing. The men are arranged in fellowship groups varying in size from two to a dozen men, and a group may accept the job at the labor value, or refuse. Having accepted, they get the full labor value, whether or not they are required to work the number of hours assumed in determining the labor value. That is to say, if a ten-hours' job is done in eight, the men have the ten-hours' pay, the gain to the employer being in the better return for plant.

The first difference from the piece-work system is that the men never get less than time wage. Again, in the distribution of the bonus, there is the suggestion of piece-work practice. The men forming a fellowship group may be earning a bonus individually, but they do not receive it all. Originally the work of all the men in a fellowship group was pooled, and was equally divided. The objections are obvious, and in order to remove the defects it was decided that a balance should be struck between the profits and loss of the individuals composing the fellowship group; the net balance of profit, if any, was divided no longer between all the members of the group, but exclusively among the "fortunate," on whose work a profit was earned; but the deduction in respect of losses by some of the members of the group are recouped, when, if ever, those other members make a gain. The company subsequently recognized that the loss by some individuals might be due to less advantageous work, or to the work being performed under special circumstances of discomfort and difficulty, and they determined that the loss should not be cumulative. Probably men who had a run of ill-luck felt the burden too great and resigned, so that the "fortunate" were never recouped. A change was made at the beginning of this year. Only one-half of the profit earned by individual workers is given to them, the other half is pooled, being divided amongst profitable and unprofitable workers alike, as well as among laborers assisting the mechanics in the fellowship group. Mr. Hill says, "the individualist and socialist forces are thus placed in exact equilibrium." But the question comes to be, How long will the individualist help to maintain the balance at his own expense? That remains to be seen. Most workmen do not mind being socialists, provided there is gain, but will refuse being individualists at a personal loss.

There is in the report a wealth of detailed results as to the profits, etc., in connection with the Thames Iron-Works' scheme; but into these we do not care to enter in the meantime. The bonus of the past five years has been equal to 3.22, 6.83, 4.92, 4.27 and 5.68 per cent, respectively. In ship-building it has usually been highest, 6 to 8 per cent; in engineering it was 6.49 in the first year, but has never since exceeded 3.66; in civil-engineering, from 3 to 4 per cent; and in the dry-dock work, 5½ per cent. Moreover, Mr. Hill considers that it has sweetened the relations between employer and employed. That is the most important desideratum; but we do not know that a fair piece-work system would not attain the same result, with less expenditure for book-keeping, etc., and with higher economy in production generally. The Thames Company make no secret of the conviction that it is desirable to make the groups as small as possible.

A piece-work system, to be fair, should be reasonably liberal and, where possible, rates should be permanent over a period of years. No more effective cause of discontent can be suggested than the reduction of piece-work rates as a sequence to the earning of big wages. Such is often practised by the over-zealous foreman, sometimes without the knowledge of the employer, although we fear at other times with his tacit approval. This is especially so with squad piece-work, and it has resulted in extraordinary effort being required for little more than "time-and-quarter" wage. We are satisfied that in ordinary cases where a fair contract rate is offered as the equivalent to the standard cost, the reference rate, or the good-fellowship scale, piece-workers will attain for employers the same degree of efficiency as with any gain-sharing scheme. Careless work but indicates too often the lessening of rates of remuneration. And as for the drones in the hive, the piece-worker will as quickly get rid of him as did the good-fellowship worker at the Thames Iron-Works, where three hundred or four hundred were discharged in a few months at the request of "the fellowships." Moreover, there is no great objection to the drones ultimately uniting together as a squad. The other advantage of profit-sharing in the direction of ingenuity can readily be covered by awards for inventions, an arrangement which readily appeals directly to most men, while the detection of flagrant waste of material is the duty of the foreman. Like the workman, he need have no special incentive to duty, although the steadily growing practice of presenting a *douceur* at the end of the year, which may or may not be in proportion of the year's profit, is commendable and a special incentive. But, for this *douceur*, let there be no nibbling at piece-work contract prices.—*Engineering*.



THE NEW CATHEDRAL.—THE MEMORIAL  
TO THE EMPEROR WILLIAM I.

IN my last notes I said I would give particulars of some further new monumental works in hand at Berlin. In the first place I will now speak of the new Cathedral, the designs for which have been in the hands of various architects for quite a century, and are at last being carried out after revised drawings from a scheme by Professor Roschdorff; by the courtesy of this architect, I give a plan and a photograph from the original drawings of his elevation [See Illustrations], and would here at once mention that the Cathedral, as such, practically consists of (1) a cathedral church, (2) a marriage chapel, and (3) a mausoleum for the Hohenzollern family.

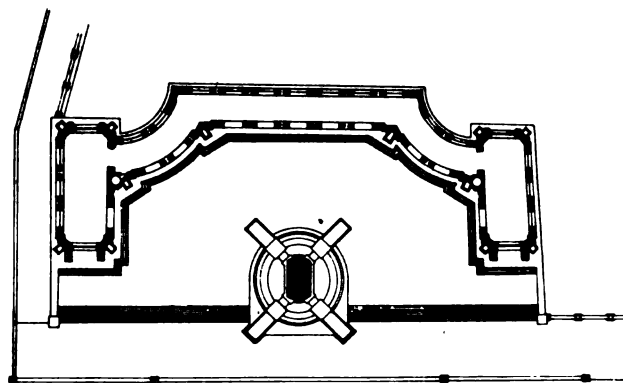
The design is the one finally approved and its execution will cost two-and-a-quarter million dollars. The plan is taken from the actual working-drawings. There are some discrepancies between the plan on the one hand and the elevation and section on the other, due to the alteration of some parts of the design. These alterations, however, principally affect the shape of the chapels to the northwest front and the apse to the northeast.

The main part of the Cathedral measures 270 feet in length. The cross is about 330 feet above the pavement. On passing up the flight of steps to the main entrance of the Cathedral, there will be a fine aspect to the right and left of the great porch, as there is little doubt that the broad passage which runs along the front of the block and is so well lighted will be very effective, the more so if full advantage be taken of a good color-study on this, the sunny side. Three doors open from the main entrance proper and a few steps take one across a somewhat low vestibule to the space under the dome. The height of the porch is 68 feet, the vestibule is 20 feet high, and the dome (taken at the foot of the lantern) 240 feet. The effect of these sudden contrasts will be somewhat startling, though we fully recognize the difficulties which have beset the architect in fulfilling the requirements laid on him.

One of these was an order that the Royal seats should be exactly opposite the altar. These seats have been placed over the afore-said vestibule: they could not well have been placed at a higher level. It is under the dome that the services will be held, i. e., it is this part of the building which is to serve as the "Cathedral Church" proper. The orientation of the altar is exactly northeast, and the pulpit stands exactly to the east. There will be seats for a congregation of fourteen hundred and eighty on the floor, and, besides, there will be a gallery to the southeast—if we may call it so—for another hundred and twenty, besides the choir gallery to the northwest for two hundred; the court seats, to which we referred above, for seventy, and the galleries in the three niches reserved respectively for the ministers, the diplomatic corps and the clergy, with forty seats each. The total seating accommodation is, hence, nineteen hundred and ninety, which on extraordinary occasions could easily be increased to three thousand,

while at state functions, when the majority would stand, room could be found for quite five thousand without crushing.

The chief dimensions of the Cathedral Church are 170 feet from the main-entrance doors to the back of the altar, and 100 feet for the interior diameter of the dome. Light enters at eight sides through



Plan of the National Monument, Berlin.

large windows between the two entablatures, and smaller ones at the base of the dome. Some light will also enter through the lantern. The only offices in connection with the Cathedral Church proper consist of a vestry and a waiting-room on either side of the altar, each of which have their own entrance and lobby from the northeast front.

As regards means of exit and ingress, the plan shows there will be a sufficient number. There will also be ample communication with the galleries, five staircases having been provided for this purpose. One of them is reserved for the Court. Members of the Court

intending to use the Royal seats have a special carriage approach at the southeast end of the long passage on the main front. There is a separate lobby for their use and a lift has been provided. The other south staircase is reserved for the Diplomatic Corps. The approach to this staircase can be easily cut off when requisite, and the whole of this Court and Diplomatic corner kept private if the occasion requires it. The Ministers of State will use the west staircase, while the clergy will share the east staircase with part of the congregation (probably Court officials) which is to have seats in the southeast gallery. The choir has its own staircase at the north corner. The two last-named staircases, which are approached from lobbies on the northeast front, also lead to the confirmation and classrooms, which are on the same level as the galleries, and to the offices of the secretaries and treasurers to the chapter.

To the northwest of the dome the design shows the proposed

memorial church, which, with its crypt, is to form a kind of *campo santo*, in which memorial and other services can be held on special occasions. Though this part of the building has its own approach from the outside—at the northwest corner of the main front—its principal entrance will practically be from the Cathedral Church through three doors on the northeast. The plan here explains itself, the ring of side-lighted chapels, if we may call them so, giving



Central Feature of the National Monument, Berlin. Herr Begas, Sculptor.



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BUILDING FOR THE LINDELL REAL ESTATE CO.

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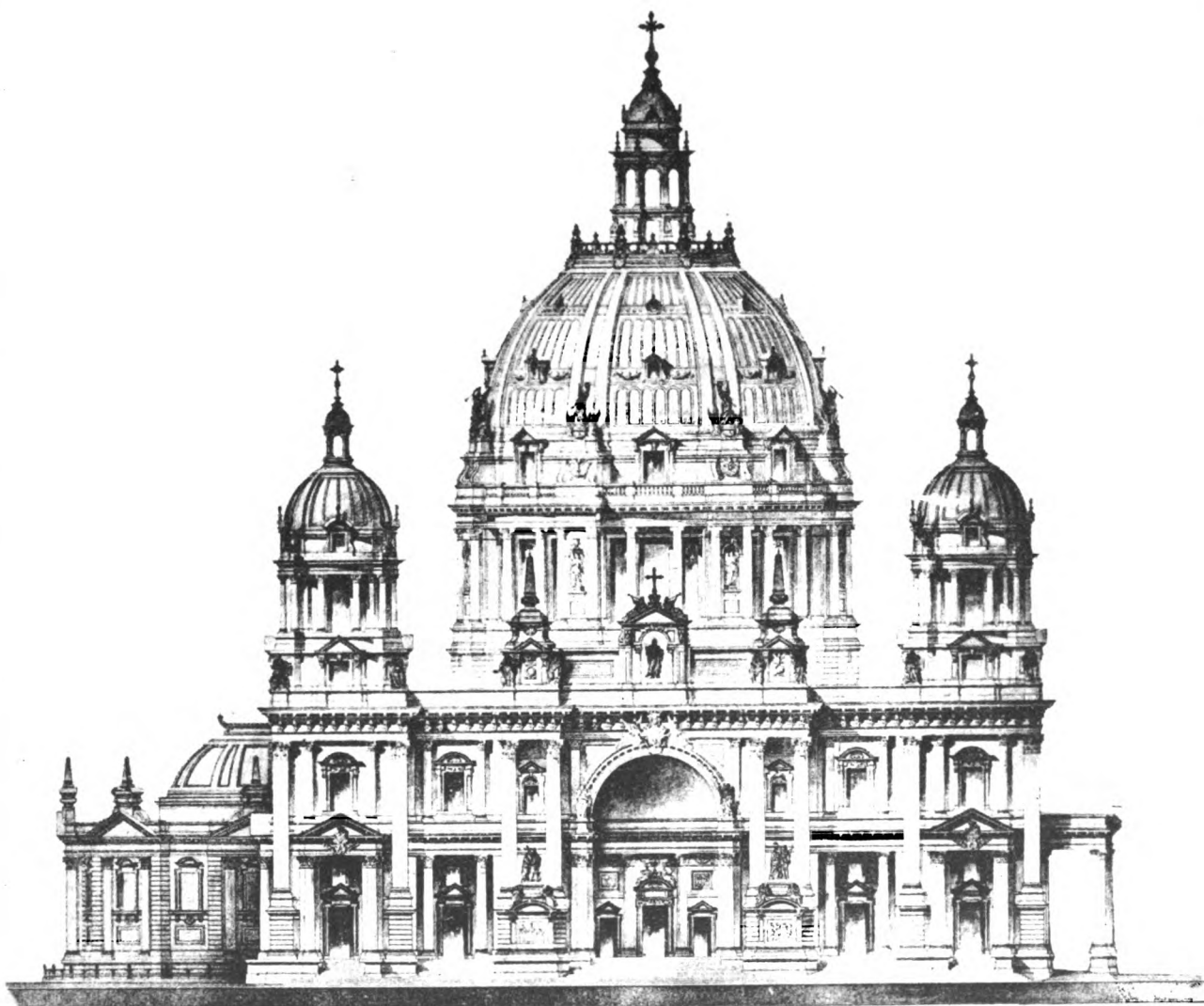
MPANY, WASHINGTON AVENUE, ST. LOUIS, MO.

DOLIDGE, ARCHITECTS.









THE NEW CATHEDRAL, BERLIN, PRUSSIA.

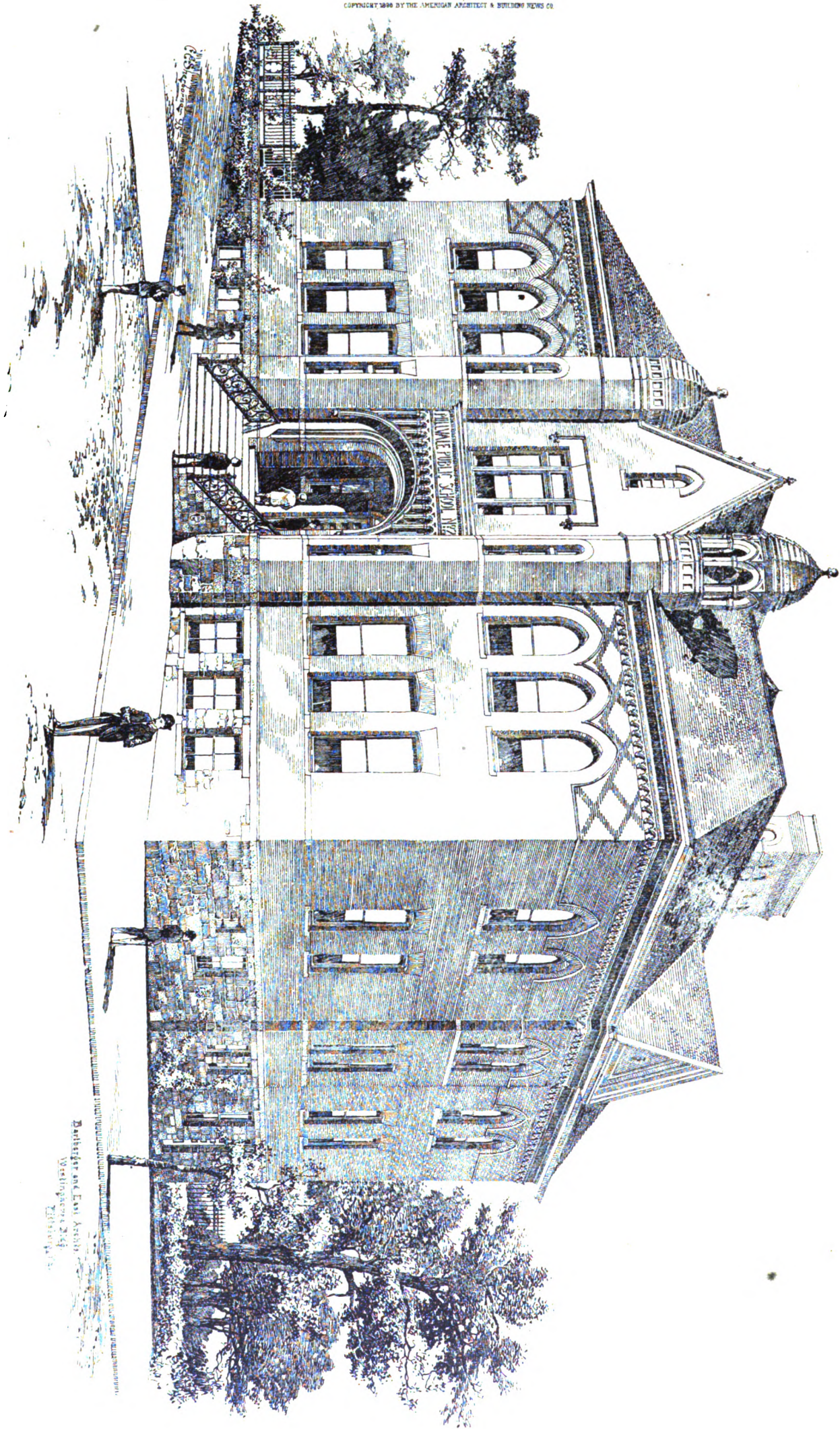
PROF. ROSCHDORFF, Architect.

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Milvale Public School Bldg. Milvale Borough, Allegh. Co., Pa.

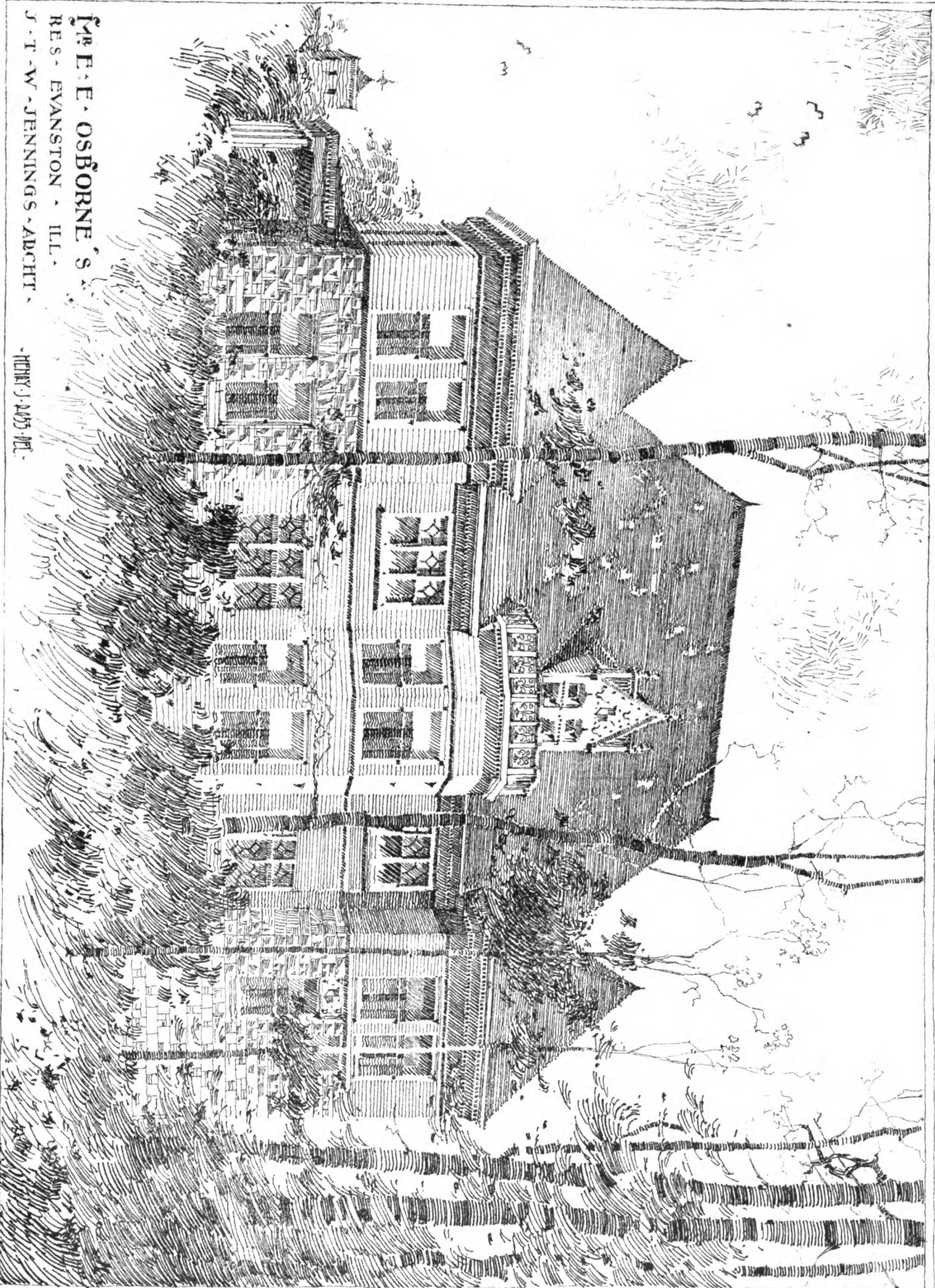
Barthelme and Levi Architects  
Westinghouse Bldg.  
Pittsburgh, Pa.

ILLUSTRATED BY P. S. NEW



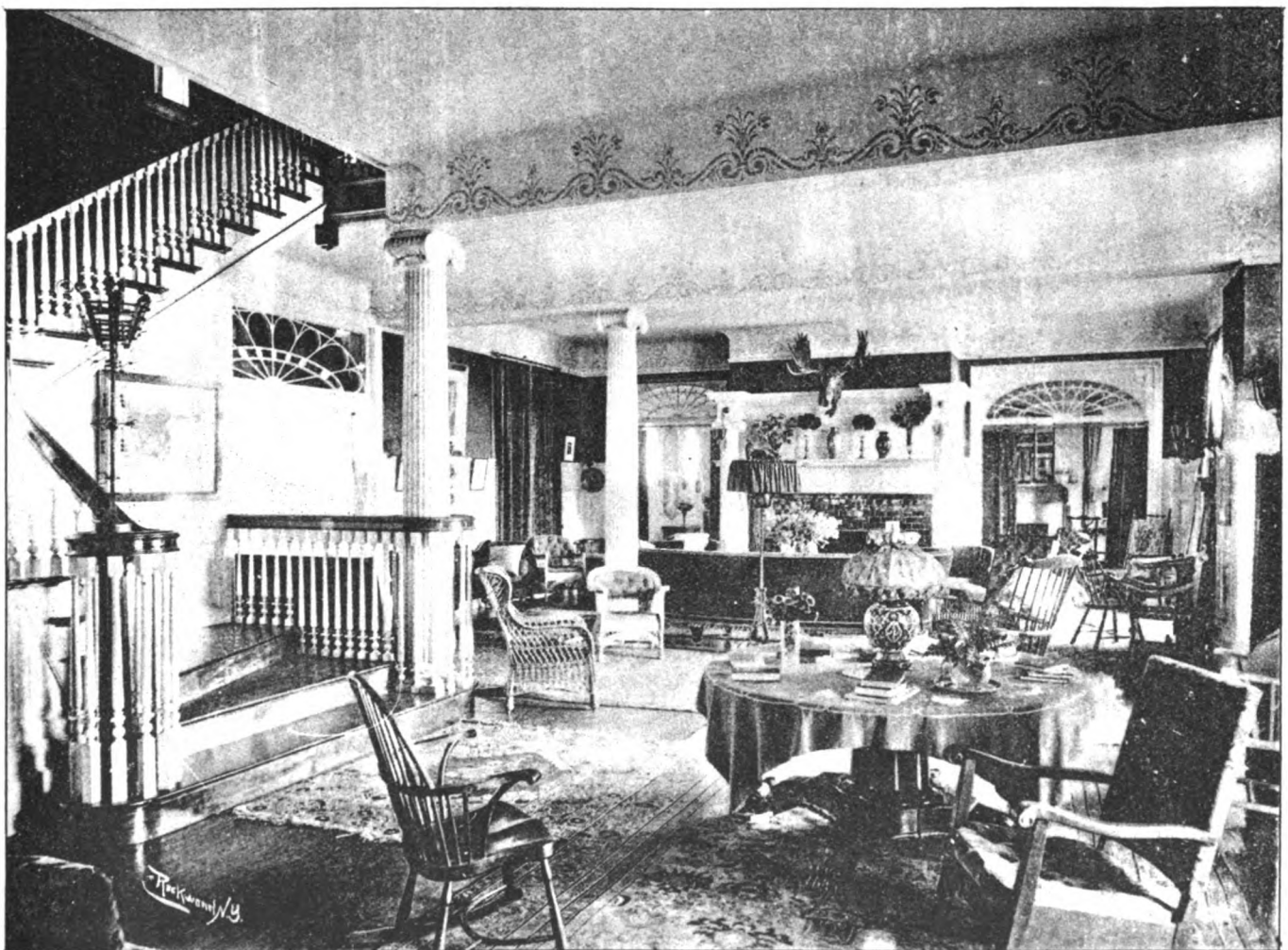
MR E. E. OSBORNE'S  
RES. EVANSTON, ILL.  
J. T. W. JENNINGS, ARCHT.

HENRY J. ADAMS, DEL.





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"KATONAH'S WOOD": HOUSE OF CLARENCE WHITMAN, ESQ., KATONAH, N. Y.

LAMB & RICH, Architects.

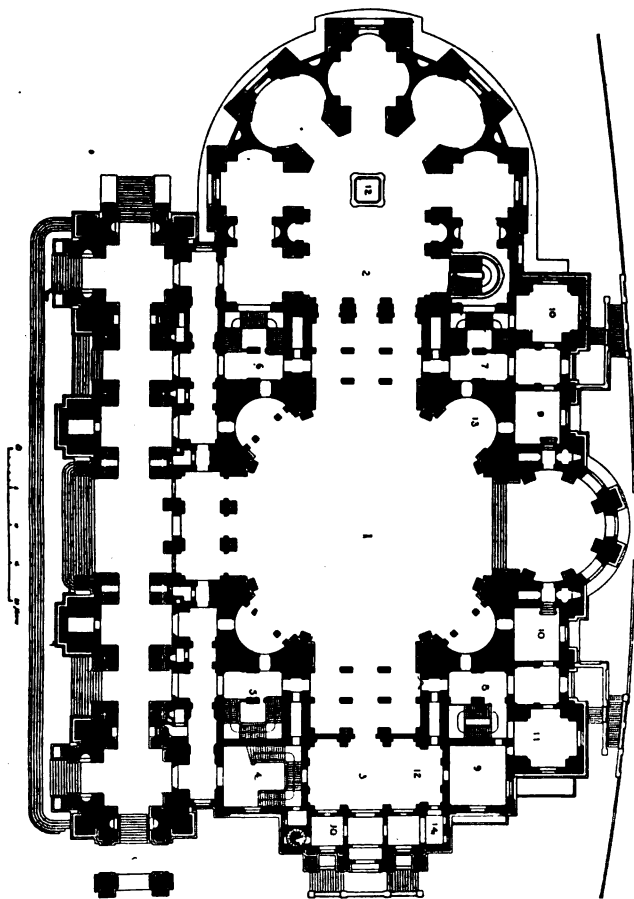




excellent opportunities for placing the memorials, while the top-lighted central part remains free for the services. As will be seen, a staircase is to give easy access to the crypt, which will be a very extensive one, including, as it does, the space under the dome. The crypt will be tolerably well ventilated, and the part under the Memorial Church even fairly lighted from an area running round the northeast side of the block. The height of the crypt averages, from floor to vault, 16 feet.

The baptistery, required both for ordinary christening and marriage ceremonies, has been given a place on the southeast front facing the Royal Castle. It is practically an entirely independent part of the building, with its own approach, entrances, lobbies and sacristies, though it can also easily be reached from the Cathedral Church proper by three doors and from the Royal entrance and staircase by a fourth. The altar has its orientation due northeast, and there will be sufficient seating accommodation for a congregation of one hundred and sixty. The dimensions of the baptistery are 30 feet by 65 feet. The lighting will be partly from the top and partly from the side. A winding staircase leads to a small gallery opposite the altar.

As to the actual architectural treatment, both of the façades and the interior, one may say that though academically correct from the



Plan of the Cathedral.

- |  |  |                   |
|--|--|-------------------|
| 1. Cathedral Church.                   | 6. Staircase for the Ministers.                  | 10. Waiting-room. |
| 2. Memorial Church.                    | 7. Staircase for the Choir.                      | 11. Beadle.       |
| 3. Baptistery.                         | 8. Staircase for the Clergy and Court Officials. | 12. Altar.        |
| 4. Staircase for the Court.            | 9. Vestry.                                       | 13. Pulpit.       |
| 5. Staircase for the Diplomatic Corps. |  | 14. Font.         |

German point-of-view, it will probably find but few admirers in this country. The younger generation of architects abroad call the building an encyclopædia of Italian Renaissance architecture and only wish its different parts to be labelled. This is somewhat hard on Herr Roschdorff, though there is little doubt that parts of the design have been most carefully compiled from standard works. It is just this compiled work which is, however, the essence of what is termed the "Berlin School."

As to the materials, we understand that the Cathedral will be of brick, faced throughout with national freestone. The extent of the sculptural and fresco decoration depends on the actual cost of covering the building.

I have, perhaps, gone rather too much into detail as to the Cathedral, in comparison with other works, but I consider I am entitled to do this, owing to the interesting requirements which have been imposed on the architect and the unusual programme of his work. I will only now add that the contractors are making rapid progress, and the architect hopes to have the building finished by 1900.

Of monuments which are being pushed forward rapidly, I must next mention the national monument to Emperor William at Berlin, which is, however, scarcely the Pantheon which the admirers of the deceased monarch had hoped to have as a memorial. It is, however,

an interesting piece of work and I will attempt to describe it. Herr Begas is the sculptor and Herr Halmhuber acts as architect. I add a plan and a photograph from the model, which have kindly been put at my disposal.

The position of Herr Begas's monument is on the Schlossfreiheit near the river Spree. The statue itself shows the deceased Emperor on a charger which is led by an allegorical figure of "Victory." The pedestal, which is decorated with symbolical reliefs, has four lions at either corner, while figures representing "Peace" and "War" take up positions at the foot of the pedestal proper. The figures will be all in bronze but the pedestal will be of granite. The height of statue and pedestal together is 22 metres, or 72 feet. The distance between pedestal and the castle opposite is 35 metres or 115 feet. The entablature of the castle is about 28 metres or 92 feet above the road-level, while the cupola, which is just over the main entrance opposite the monument, is 65 metres, or 213 feet high.

As to the colonnade, there is little to say except that good positions have been arranged for the statues, or busts, of contemporary statesmen and generals. There is much symbolical sculptural decoration, the two quadrigas indicating North and South Germany. The work will be of freestone on a granite base, picked out with bronze and the busts and statues will be of bronze. The cost of the monument, complete, was originally estimated at £400,000, but Parliament has decided that not more than £200,000 is to be spent on the gratification of the Emperor's wish. We understand much of the sculptural decoration on the arcade will have to be omitted, or its completion, at least, postponed, until the country's representatives are more ready to spend the extra thousands.



THE PAST YEAR'S WORK.—THE LATEST HIGH BUILDINGS.—INSTITUTIONS FOR MECHANICAL TRAINING.—THE KENWOOD CLUB-HOUSE.—ST. ALPHONSUS.—MUNICIPAL STATISTICS.—THE DRAINAGE CANAL.—THE CITY-HALL QUESTION.—A NEW AND COSTLY BUILDING CONDEMNED.—THE STRENGTH OF FIRE-HOSE.—HONORS TO CHICAGO ARTISTS.

ANOTHER year is ended; again we write a strange figure for the last one of our date; again we look back over the finished year and its work, and once more we look forward and speculate on how much of business activity will be found in the new twelve months. Viewing it from a most optimistic point-of-view this has not been a year of architectural activity, as compared with previous seasons. Several large buildings are now nearing completion and these cause the total amount of money expended in building operations in ninety-five to be larger than in previous years, while the total amount of frontage used shows a decrease this year over that of the preceding one. In a review of the work of the year, published in one of the daily papers and written by one of our well-known architects, the statement is well put that "An architect who takes the artistic side of his profession seriously can hardly be expected to be enthusiastic over the out-put of the year. It is to be hoped that the great mass of the hopelessly commonplace houses and flats and the like that have been added to our streets, already plethoric of mediocrity, atone in some measure for their artistic shortcomings by the possession of decided merits in soundness of construction, abundance of light and air, and in that which conduces to health and comfort."

One of the largest structures now in process of erection is the Fisher Building. It will be eighteen stories and basement high, and its cost is reputed to be in the neighborhood of six hundred thousand dollars. The material will be semi-glazed terra-cotta, of a yellowish shade, the style of the building being French Gothic. The building has one hundred feet on Dearborn Street, and a little less than that on Van Buren Street, and in construction and finish will be that of the first-class modern office-building. The main entrance will be at the extreme north of the building on Dearborn Street. This was one of the buildings a permit for which was taken out before the present building ordinance limited the height to one hundred and thirty feet, as it has eighteen stories and a height of two hundred and thirty-five feet, thanks to its permit being taken out in 1891. The rapidity with which this building has been erected has made it a noticeable one to every one who has come into its neighborhood. In just thirty days these eighteen steel stories raised their skeleton on high, the work being commenced October 12th and in November of the same date a flag was flying from the highest point which the building was to reach—two stories higher than the Monadnock, and one story above the Old Colony, its two highest neighbors. It has the same height as the Masonic Temple. Of course, the work accomplished in this short month does not include any of the foundation work, which was completed last August, when work was then delayed six weeks waiting for the structural iron.

The addition to the Great Northern Hotel, before spoken of as another one of these structures of excessive height, and one over

which there was a considerable amount of discussion between the owners and architects on one side and the city building authorities on the other, is now well under way, and, if reports are true, will be as nearly a fireproof building as it is possible to make it. The new portion will extend one hundred feet east of the older part from Jackson to Quincy Streets. On the Jackson Street side the portion given up to offices will be built, while the hotel addition will be on Quincy Street, and the hotel will be left in the centre between the two. Both the office portion and the addition to the hotel will have sixteen stories, making them two stories higher than the present hotel. The stories will be kept on a level with it, however, and there will be connections between the two. Elaborately finished entrances to the theatre will be both on Jackson and Quincy Streets. Three balconies, a large stage and a seating capacity of two thousand, are some of the chief characteristics of the theatre. Retiring-rooms for the women and smoking-rooms for the men are planned at each side of the foyer. As part of the fireproof characteristics of the building, the drops on the stage will be on steel rollers and much of the scenery will be of asbestos.

The Studebaker Building, on Wabash Avenue, is one of the buildings which comes into the list of structures for ninety-five. This is now nearing completion, and is noted for unusual and interesting features in its manner of construction.

Another of the soon-to-be-finished structures of this recently finished year is the Davies Building, on Dearborn Street, while the Atwood Building is still another huge structure of ninety-five. The Davies is twelve stories high, which is an increase over the usual number of stories planned in the 130 feet, ten being the ordinary number. The lower three stories are of cut-stone, brick and terracotta of light color being used above. Two bays rise from the third story upward, and at their base, which is of cut-stone, two huge figures of Hercules are apparently to support the weight. There certainly is in this innovation great possibilities, for something sublime, or — that other quality, said to be but one step from it.

The Atwood Building was originally planned for a thirteen-story structure, but the existing building ordinance reduced it to ten.

One of the buildings of a semi-public character is that of the Lewis Institute on the West Side. This structure is the outcome of the will of the late Allan C. Lewis, who left \$1,000,000 for the erection and maintenance of a building where boys could receive the education of a practical mechanic. This brings up the number of such institutions in our city to fair proportions, as we already have in flourishing condition the Jewish Manual Training School, the Armour Institute and the Chicago Manual Training School.

Another building of this semi-public character is the home of the Kenwood Club in the southern part of the city, while in the opposite direction, in the northwest section a new Catholic church, of rather unusual size and dignity, is the work of the passed year.

The Kenwood Club-house is a fine large Colonial mansion, overlooking a shaded lawn, its material being the dark rough brick made in Massachusetts. On the east side of the building a wide porch extends the entire length, while on the west side the building comes within a few feet of the sidewalk. On the other side the entrances to the house are situated, the building on this side coming to within a few feet of the sidewalk. A rather imposing door and gateway open into the main hall, while a lesser one gives access to the ball-room, dressing-rooms, etc., so at the time of evening parties, this part can, if desired, be entirely shut off from the rest of the building, leaving the library and such rooms in undisturbed quiet. Apparently, if all reports be true, it is this same ball-room which is the *pièce de résistance* of the whole creation. A marble floor, fifty by eighty feet, is surrounded by a row of well-proportioned columns, whose fluted shafts separate from the main floor a row of comfortable seats. This not only beautifies the hall, but also the positions of wall-flower and chaperone. Windows on three sides and a stained-glass skylight light the room in daytime, while rows of incandescent lights on the ceiling, separate lights on the columns and lights behind the skylight are one of the features of the room in the evening. The heating of the room is by a system of indirect radiation by which the heated air is admitted into the hall at a height of ten feet from the floor. A well-appointed stage occupies the south end of the room, whose seating-capacity can, as occasion demands it, be increased by opening very wide folding-doors into the main hall. In this way, it is said, six hundred people can be accommodated. The building possesses much extremely good and interesting detail, and is really one of the most satisfactory constructions from an artistic standpoint erected during the passed year. That it should be so harmonious is rather a source of surprise, since three architects are reported to have been associated in the designing of the building.

It is a curious fact that very often in elaborate and minute accounts of these buildings, given in the daily papers, which are not ordinarily sensitive about mentioning names, absolutely no mention is made of the architect. Of late years, members of this profession have received far more recognition than heretofore, but in the case of a club-house, with a list of the officers of the club, its prominent members and an enthusiastic and detailed account of its new home, no mention is made of the creator of the work which is being admired. How likely would a musical critic be to give an account of some fine musical composition and fail to mention the name of the composer, unless to mention it would be a twice-told tale; and what would be thought of an art critic, who forgot to mention the name of the artist whose picture he was either praising or condemning?

It looks as if the time were a long way off before architecture would receive its proper recognition along with the kindred arts of music, and painting and sculpture.

Saint Alphonsus Church, the German Catholic one above mentioned, is a very fair example of the Gothic style as used in Germany to-day. One feature, an unusual one in this country, is the raised grand steps or platform from which opens the nave and side entrances. The church, which is a large one and in fairly good style, would have a good deal of dignity without such surroundings, but it certainly does gain much from it. The height of its main tower is nearly 250 feet, and it is of good proportions. With the object of economy, so often practised in this country, the front of the edifice is of buff Bedford stone, while the sides and back are of brick. Fortunately it is no one but Satan who is told to get behind us, and from the frequent practice of building only the front of a church of stone, one would think that the God to whose glory it was erected was not expected to look around the corner. The custom of building well as far as they go, even if apse and tower and terrace have to wait, say, even for a century, does not prevail in this country as in the old, and even when the exterior of a church has some dignity it is seldom that the interior realizes the expectations held out by outside impressions.

In glancing over the annual reports which come from the various municipal departments of our great city, some rather interesting facts are brought to light. There has been pumped during this year of 1895, for this very dirty Chicago, 91,798,813,554 gallons of water, over 300,000 feet of water-pipe have been laid, and 4,629 miles of sidewalk of various kinds have been put down. Forty-six miles of paving at a cost of over a \$1,500,000 have been accomplished, while from the Engineering Department comes the report of a tunnel into the Lake from Lake View being practically completed. Over 1,300 feet have been built during the year of a seven-foot tunnel connecting with the Chicago Avenue pumping-works; a good start has been made on a new land-tunnel which will furnish water to the north-western portion of the city, and work which will mean an outlay of \$90,000 has been accomplished on the outer Hyde Park crib. By the Bridge Department three new bridges and one new viaduct have been nearly completed, and plans have been drawn for a new viaduct at Wells Street over the tracks of the Northwestern railroad, which will conform with the remodelling of the Wells Street bridge for the accommodation of the Northwestern Elevated Road.

Among engineering circles the great work here is still that on the Drainage Canal, before mentioned in these letters; a work which, when completed, will turn our sewage away from the Lake to run westward, mingled with Lake Michigan water till it reaches the river system at our west and south. A short extract from the annual report shows the amount of money expended and work accomplished. During the year of ninety-five nearly 80 per cent of the work of digging the canal has been completed. At present \$18,879,392.02 have been expended, \$7,400,752.34 being used in the work of last year. At present the estimate of the entire cost of the main channel is \$28,000,000. In excavating glacial drift the number of cubic yards this year has been 7,475,600, while 5,130,000 cubic yards of solid rock have been removed. During the last month at four o'clock in the morning one of the huge dynamite magazines, through carelessness on the part of some of the employes, exploded, and the shock was so great as to shake houses and awaken their inmates at a distance of 40 miles from the place. Strange to say, no lives were lost.

Although this has been considered a year of financial depression, still the revival of activity among certain classes and trades would indicate better prospects for the future. Last year's real-estate transfers show an improvement over the preceding years to the amount of \$12,000,000. In architects' offices the feeling is generally that the tide has turned and brighter times are coming than those which have just passed by in the last year, or year and a half. While no unusual activity is felt in building circles, still the outlook for the future is more hopeful and better times seem to be expected.

Among the schemes for the future, that of erecting a new city-hall is still present, and talked and written of. The people of the West Side are trying to persuade themselves and the public that Union Park, a small West-side pleasure-ground, is in the centre of the city, and that of all places this would be the most suitable site for the new city-hall. Maps are drawn showing the relative position of Union Park to the rest of the city, in which the down-town streets are drawn with Chinese accuracy, while many of the streets in the western part of the city have a certain Whistler suggestion in their uncertain mistiness. It will only be after a long and hard struggle that this matter will be decided, and if ninety-six sees any final decision, the matter will have been accomplished with quickness and dispatch.

A large tract of land in the southern part of the city, known as that of the old Douglas University has just been sold and will be the site of forty-four houses. If reports be true, this group will be a veritable congress for the study of all manner of styles of architecture, for the Classic and Gothic of all nations, not to mention similar attacks of Renaissance, will disport themselves on this once barren prairie.

One large office-building is also reported as about to be erected in the down-town district, this on the site of the old Grand Pacific Hotel, while several smaller structures of a similar character are upon the boards in some of the prominent architects' offices.

Though these buildings will, doubtless, some of them, be built to carry more stories than is at present permissible, the ordinance limiting their height to 130 feet being now in full sway.

At the December meeting of the Illinois Chapter of the American Institute, the subject of this ordinance was taken up and the report of the standing committee on this topic, which advocated the 160-foot limit for the height of fireproof buildings, was listened to. Probably the subject will be again brought forward in the January meeting; if so, the City Building Commission as well as representatives from the Chicago Real-estate Board and the Chicago Underwriters' Association will be asked to be present.

Some of the members favored the testing of the legality of the ordinance, if peaceable means failed to secure its repeal, and the wisdom of it was thoroughly agitated by many of the members present. By putting such a limit to expensive fireproof buildings, it was alleged that as paying investments they were not a success, and that a stop was put to the erection of such buildings, while, as a result of this, many old and insecure structures were remodelled and enlarged, the probable consequences resulting from this act being disastrous fires in the future.

The Chapter has also taken up the subject of uniform contract for the State, which was abandoned by the Institute, as a whole, at the St. Louis meeting. The committee on this subject promises to report something in the near future.

The City Building Department has taken a positive stand about one building during the last month. A certain structure known as the de Tamble has recently been finished on the West Side at a cost of nearly \$100,000. It remained for one of the tenants to discover that something was "queer" with one of the walls, and upon investigation it was discovered that the west wall was 14½ inches out of plumb. Notice was given to the tenants to vacate the place and the entire building was condemned as unsafe. The explanation of this unusual state of things is, according to the architect who was called in consultation in the case, that the foundations of the big building were laid in freezing weather. He further says, "As soon as the weight began to make itself felt, the concrete

'squashed' out, and the wall began to lean. It is evident, and entirely probable, that as soon as the lean in the wall was noticed an attempt was made to correct it by building the wall back in the other direction — an act of folly, to say nothing worse of the matter. This made the wall curve. If it had been found that the building-back process had gone too far, it would have been necessary to build the other way again, and then one side of the structure would have looked like a letter S, though much modified.

"We shall be obliged to take down the building as far as the second floor on one side, and as far as the first on the other. We have already reinforced the foundations with concrete and steel beams, and they are strong enough to bear much more than the weight which they will be called upon to sustain.

"The material in the building is new and can be used again, but the cost of taking it down and rebuilding will be \$30,000, not including the loss of rentals.

"The building from basement to roof has been fitted with cribs, which consist of great beams put together like a square log-house. These cribs, extending along the sides of the structure on each floor, practically take the place of walls and, with the great wooden braces which have been put in, do away with the danger of a collapse while the work is in progress."

Two disastrous fires have occurred during the last month (one of

them with a deplorable loss of life), which have given rise to the usual unsatisfactory investigation on the part of the City Fire Department as to the cause, and subsequently a fire-test was made on the Masonic Temple, one of the highest buildings in town, by the City Fire Department. To Chief Sweeney the experiment proved that they could get a stream of water at the top of the highest buildings, provided all the stand-pipes were in perfect order, as with a slight leak in the pipe at the Masonic Temple they were able to get but a small supply of water. Whether it would be possible to carry a load of hose sufficient to fight a fire as far up as the Masonic Temple roof seems to awaken questions of doubt in the minds of some of the men conducting the test. The Superintendent of the fire-patrol, however, in an interview, expressed himself as satisfied with the result of the experiment. "I regard the experiment as perfectly satisfactory. The leak in the stand-pipe joint below the first landing of escape was caused by the bend in the pipe, and was only a very slight one. In the event of a fire such a leak would cut no figure. These stand-pipes are examined in the course of the regular

inspection of the buildings by the officers of the Fire Department, valves and connections being tested, and any serious defect would be soon discovered. Fire-hose is supposed to be able to stand a pressure of 800 pounds, but I do not recall any case where it has been fairly tested at a height of more than 125 feet. There was a small fire in the Great Northern Hotel some time ago when a hose was carried to the roof, which must be 200 feet high, but the pressure was so small that you couldn't really tell anything about it. These high buildings are all right for office purposes, and I don't expect ever to see any trouble from fire in them, but when they are filled with merchandise, which will generate a great heat, it is a totally different thing. The heat in these cases is so intense that the tiles get red-hot, and, when water is thrown on them, just crumble to pieces."

In the early part of December, the Chicago Architectural Club held its annual competition for the Robert Clark prize. Mr. Robert Clark, a prominent iron contractor, wishing to do something for the encouragement of architectural students, placed \$1,000 in the hands

of a number of prominent architects, that it might be devoted to some series of prizes. They ultimately put it in the hands of trustees with the understanding that the interest from it should be devoted to the purchase of five medals, one gold, one silver and three bronze, competition to be made under the auspices of the Chicago Architectural Club. This was in 1888, and the Club competition has now become quite an event of interest among architectural students, not only in our own city, but east and west of us as well. The problem this year was that "A man, wishing to share his large and valuable collection of paintings, statuary and architectural fragments with his townsmen, has decided to place them in a building which he proposes to erect for the study of architecture, painting and sculpture. The building is to face the town square and is not to be more than 150 feet in its greatest dimensions. It shall consist of one story and a high basement." These were the chief conditions.

Thirty-two sets of drawings were submitted, of which one from Boston took the gold medal, a set from Lynn, Mass., the silver, and one from Buffalo the bronze. The two other bronze medals and the honorable mentions were captured by Chicago men. A set of drawings from Brooklyn, owing to some mistake in delivery, arrived too late to enter the competition, which was much to be regretted, as they were full of merit.



Interior: "Katonah's Wood," House of Clarence Whitman, Esq., Katonah, N. Y. Lamb & Rich, Architects.

Twice within a month a Chicago artist has received recognition from the world of art not centered in his own town. Mr. Walter McEwen, whose work has made his name well known throughout the breadth of our country, as well as in the galleries abroad, has with the beginning of the new year received the red ribbon of the Legion of Honor, from France. Upon Melchers and MacMonnies the same honor was bestowed last year. Mr. McEwen has left Chicago for Paris, but will stop in Washington on his way there to attend to the final arrangements for some decorative work of his in the new Congressional Library.

The other recognition of a Chicago artist comes through the Peabody Institute, in awarding the Roman Scholarship to Herman Atkins MacNeil, a young Chicago sculptor. Mr. MacNeil, unlike Mr. MacEwen, is not a native Chicagoan, but much of his best work has been done here. He was born in Chelsea, Mass., beginning his studies in the Massachusetts Normal Art School. After trying his hand at mechanical draughting and painting, he found that the work of the sculptor was the thing which attracted him the most, and like many another American artist, turned his face towards Paris. After returning to America in 1891 he was fortunate enough to be able to work in with Martiny in his excellent World's Fair work. This brought Mr. MacNeil to Chicago. The large figure of Electricity in the Electricity Building at the Fair, and the four large panels in the entrance to the Marquette Building are perhaps some of his largest and best-known works. He has done some excellent things for which he has taken the American Indian for model.

The Prix de Rome includes a studio and other accommodations in the Villa Ludovici in the City of the Cæsars, "and an allowance from the Rinehart fund of \$1,100 a year for expenses, personal and professional, including the cost of passage to Europe during the first year of holding the prize."

This is the first Roman Scholarship ever bestowed in America and is founded by Mr. Rinehart, of Baltimore, a sculptor of the early American School. Coming, as it did, from a jury composed of Augustus St. Gaudens, J. Q. A. Ward, Daniel C. French, Charles F. McKim and a Baltimore art connoisseur, Mr. Walter, it was in the mere judging a delight and honor.

Among the losses which Chicago has suffered this year in artistic and architectural circles should be counted the death of Mr. C. B. Atwood. It is a source of regret to all Chicagoans that no more work will stand in their midst from the skilful hands which planned the Art Palace and some of the finest creations in our wonderland of ninety-three.

#### THE SECRETARY OF THE TREASURY ON PUBLIC BUILDINGS.

SECRETARY CARLISLE has made the following response to a resolution of inquiry, adopted by the Senate December 5, in regard to the delay in erecting a certain public building in Oregon, which covers the whole ground as to the delay in constructing public buildings all over the country. The Secretary says:

"At the date of the convening of the 51st Congress (the Congress which has authorized the public building at Portland, Or.), there were upon the books of this Department appropriations for 163 public buildings, all of which were in various stages of construction. That same Congress authorized the construction of seventy additional public buildings, and provided for the extension of seven marine hospitals, at an aggregate limit of cost of \$12,916,890.77. The 52d and 53d Congresses authorized, altogether, the construction of twelve additional public buildings, and improvements to five marine hospitals and other structures at a limit of cost of \$5,843,000, making an aggregate of ninety-four buildings authorized to be constructed and improved at a cost of \$18,759,890.77, which, in addition to the 163 buildings above referred to, make a total of 257 buildings upon which construction operations have been in progress since December, 1889, of which number there are, at this time twenty-five buildings for which no drawings have been prepared.

"It has been the general practice of the department to begin work upon the various public buildings in the order of their authorization by Congress, and under this practice there remain six buildings which claim priority over the public building at Portland, Or.

"Notwithstanding the large number of public buildings authorized by Congress, no increase in the force of the office of the Supervising Architect has been provided for, although a specific request to the Committee on Appropriations of the House of Representatives was made by this department on January 22, 1895, that the amount allotted for that office for the fiscal year ending June 30, 1896, should be increased to \$250,000, the reason given being that such an increase was necessary in order to enable the department to employ a sufficient technical force to bring the work up to date. This request, however, was not complied with, and the usual allowance of \$200,000 was made.

"Since the 6th of March, 1893, this department has made every effort possible, with the limited appropriation allotted by Congress for the support of the office of the Supervising Architect, to expedite the preparation of drawings and specifications for the various public buildings under its control, and to take up new work as rapidly as the force would permit, and to proceed with the construction of buildings with all possible expedition.

"The sum of \$200,000, which the Secretary is authorized by Congress to use during each fiscal year for the preparation of designs,

plans, specifications and drawings for public buildings, does not exceed the amount of the usual charges of a competent architect for the preparation of designs, plans and specifications and superintending the construction of a single public building of the first class, and it must be evident, therefore, that the office of the Supervising Architect must be relieved from a very considerable part of the labor now imposed upon it, or adequate provision must be made for the pay of a sufficient number of skilled employes, or that the work upon the many public buildings must continue to be delayed, as heretofore."



#### AMERICAN INSTITUTE OF ARCHITECTS: DIRECTORS' MEETING.

THE first meeting of the Directors of the American Institute of Architects was held at the headquarters of the Institute, 156 Fifth Avenue, New York, on Friday, January 10th at 10 A. M., President George B. Post in the chair.

It having been previously arranged that the meeting should be adjourned to the time of the opening of the Architectural League Exhibition, and that business of general interest should not be considered at this meeting, the records of the last meeting, which was held in St. Louis, were not read, and the President announced that he would appoint the members of the several Committees, and named them as follows:

*Executive Committee.*—George B. Post, New York, *Chairman*; Alfred Stone, Providence; S. A. Treat and Daniel H. Burnham, Chicago; E. H. Kendall, New York; W. S. Eames, St. Louis; Robert D. Andrews, Boston.

*Committee on Foreign Correspondence.*—W. L. B. Jenney, Chicago, *Chairman*; R. S. Peabody, Boston; Henry Van Brunt, Kansas City; C. F. McKim and Thomas Hastings, New York.

*Committee on Education.*—Henry Van Brunt, Kansas City, *Chairman*; William R. Ware, New York; T. P. Chandler, Philadelphia; N. C. Ricker, Urbana, Ill.; A. W. Longfellow, Boston.

*Committee on Publication and Library.*—Frank Miles Day, Philadelphia, *Chairman*; W. L. B. Jenney, Chicago; Cass Gilbert, St. Paul; T. C. Link, St. Louis; W. R. Briggs, Bridgeport, Conn.

*Committee on Conservation of Public Buildings.*—R. M. Upjohn, *Chairman*; The Presidents of the several Chapters.

*Committee on Building-Laws.*—T. M. Clark, Boston, *Chairman*; N. LeBrun, New York; Alfred Stone, Providence.

It was *Voted*, That when the Board adjourns, it shall adjourn to meet in New York on the 14th of February at 10 A. M.

The Board then proceeded to open the letter-ballots for the amendments to the Constitution and for the election of Fellows to the Institute, and it was found that the following men were elected: Albert W. Hayward, Cincinnati, O.; Andrew G. Thomson, New York, N. Y.; Charles C. Taylor, Cincinnati, O.; Ennis R. Austin, South Bend, Ind.

It was found that both of the proposed amendments to the Constitution were decided in the negative. The vote on Article IV, by which it was proposed to reduce the number of Directors to seven, was:

Affirmative.....	280
Negative.....	30
Blank.....	23

The vote on Article VI, by which it was proposed that the Constitution could be amended on a two-thirds affirmative vote of the ballots cast, instead of a two-thirds affirmative vote of *all the Fellows* of the Institute, was:

Affirmative.....	307
Negative.....	23
Blank.....	3

The number of votes necessary to amend the Constitution is 310.

The publishers of the St. Louis Convention Souvenir presented a proposal to print a History of the Institute to be prepared by some prominent member of the same, with

"... a photographic collection of all members of the Institute, together with a brief biographical sketch of each, and biographies of the most prominent deceased members, such as Messrs. Root, Richardson, Hunt and others; also a photographic collection and write-up of the most prominent builders, contractors and manufacturers in the building line: the whole to be published in two volumes. Volume 1 to contain the history of the Institute and portrait gallery of members, with biography of each, portraits of deceased members and biography; Volume 2 to contain write-ups and photographic collection of contractors, builders and manufacturers in the building trades."

It is proposed by the publishers, I. Haas & Co., if authority is granted them to publish such a work, to do it free of charge to the Institute and send to each Fellow of the Institute a handsomely bound copy, free of charge. The matter was laid upon the table until the next meeting of the Board, when a full attendance is expected.

Adjourned.

Attest: ALFRED STONE, *Secretary*.



## NEW YORK CHAPTER, A. I. A.

A REGULAR meeting was held in the Chapter Quarters, 156 Fifth Avenue, on Wednesday, December 11, 1895, at 3.30 P. M.

The minutes of the last meeting were read and approved.

A letter was read from the Superintendent of Buildings requesting the Chapter to appoint a committee of not more than three, to coöperate with the Board of Examiners of his Department and many of the large organizations interested in real estate, building, building-material, and structural work in New York City and desiring a revision of the Building-Laws. A committee of three was accordingly appointed.

The following, reported by a special committee, was read:

"In the death of Richard Morris Hunt, the New York Chapter of the American Institute of Architects has lost its most cherished member, its ablest counsellor and foremost friend.

"His artistic gifts were so many, his personal qualities so rare, his instincts so high, his devotion to his work so zealous, his intercourse with his co-workers so helpful and loyal, that association with him was an education and his comradeship a delight.

"Bereft of his splendid personality, we still have the inspiration of his ethics, and of his varied and scholarly achievements.

"So, while we deeply mourn, we equally rejoice in his career, and in the high professional standard he has set for us and for succeeding generations.

"Beside commemorating his great services to his art, we desire to offer to Mrs. Hunt, in her personal loss, a sympathy which words are barren to express."

The memorial was adopted.

One of the representatives of the Chapter in the Council of the Fine Arts Federation reported that, at a recent meeting of the Council, a resolution had been adopted adverse to the acceptance of the fountain offered by German-American citizens to the city as a monument of Heinrich Heine, the distinguished German poet, and that the Chairman of the Council had been authorized to make use of its opinion in his discretion.

A member was appointed the representative of the Chapter on the Advisory Board of the Committee on Fireproofing Tests, coöperating with a body engaged in a revision of the Building-Laws of New York City.

A. J. BLOOR, *Secretary*.

## CHICAGO ARCHITECTURAL CLUB.

THE Ninth Annual Exhibition of the Chicago Architectural Club will be held at the Art Institute, Chicago, opening March 27, 1896.

This exhibition will include architectural drawings and perspectives in all renderings, scale, details of public and private work, projects, landscape drawings of parks and other public improvements, works of sculpture and artistic exhibits of works of the allied arts.

Detailed information with circular of instructions and application-blanks can be had by addressing

FRANK M. GARDEN, *Secretary*.

274 Michigan Ave.

## THE T-SQUARE CLUB, PHILADELPHIA.

A SPECIAL meeting of the T-Square Club was held January 8th, at noon, to take action on the death of one of its founders and most sincere friends, John Stewardson.

Resolutions were adopted as follows:

*Whereas*, By a sudden and sad calamity, God has seen fit to take from us our beloved comrade John Stewardson, be it

*Resolved*, That the members of the T-Square Club express to his family their heartfelt sympathy in this affliction.

For his loss to us is incalculable; as one of the founders of this Club, as its President, and for years a member of its Executive Board he remained to the end one of its most enthusiastic supporters; as one who has guided, encouraged and sympathized with us, we deeply mourn his loss.

An unaffected simplicity and enthusiasm combined with his fidelity to the highest ideals made him the friend of the humblest, and this will remain his proudest and most lasting memorial. Be it further

*Resolved*, That his unblemished professional record stands as a permanent inspiration to us; that his career affords a striking example of the success to be expected from a consistent honesty of purpose, united with a faithful performance of duty.

A motion was made by Mr. Boyden, that a letter of condolence should be written to Mr. Cope, and a committee of three—Messrs. Boyden, Seeler and Day—were instructed to express to him our deep sympathy on the loss which he has sustained, and to see beneath our words more than could be written.

ADIN B. LACEY, *Secretary*.

THE STORY SCULPTURES.—The will of William Wetmore Story, the sculptor who died some time ago in Italy, gives his marble statues to his son Julian, but the plaster statues, casts, models, sketches and certain furniture are given to his son Waldo, to whom is given a private letter containing the wishes of the testator as to their disposition.—*Exchange*.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

HENNEPIN COUNTY COURT-HOUSE, MINNEAPOLIS, MINN. MESSRS. LONG & KEES, ARCHITECTS, MINNEAPOLIS, MINN.

[Gelatine Print issued with the International and Imperial Editions only.]

THE NEW CATHEDRAL, BERLIN, PRUSSIA. PROF. ROSCHDORFF, ARCHITECT.

SEE letter from Berlin elsewhere in this issue.

PUBLIC SCHOOL BUILDING, MILLVALLE BOROUGH, PA. MESSRS. BARTBERGER & EAST, ARCHITECTS, PITTSBURGH, PA.

HOUSE FOR E. E. OSBORNE, ESQ., EVANSTON, ILL. MR. J. T. W. JENNINGS, ARCHITECT, CHICAGO, ILL.

"KATONAH'S WOOD": HOUSE OF CLARENCE WHITMAN, ESQ., KATONAH, N. Y. MESSRS. LAMB & RICH, ARCHITECTS, NEW YORK, N. Y.

STAIRCASE HALL IN SAME HOUSE.

BUILDING FOR THE LINDELL REAL ESTATE CO., WASHINGTON AVE., ST. LOUIS, MO. MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

DECORATION OF DOMED CEILING OVER ROYAL STAIRCASE IN THE PALAZZO FARNESE, CAPRAROLA, ITALY.

A GROUP OF GERMAN CASTLES.

EXAMPLES OF LOUIS XVI STYLE.

A GROUP OF SUN-DIALS AND ESCUTCHEONS.

[Additional Illustrations in the International Edition.]

MONUMENT TO THE MEMORY OF SENOR J. ANDRESSEN, OPORTO PORTUGAL. SENOR JOSÉ MARQUES DA SILVA, ARCHITECT.

[Copper-plate Photogravure.]

HENNEPIN COUNTY COURT-HOUSE, MINNEAPOLIS, MINN. MESSRS. LONG & KEES, ARCHITECTS, MINNEAPOLIS, MINN.

[Gelatine Print.]

DECORATIONS OF AN HÔTEL IN THE RUE DARU, PARIS, FRANCE. M. RICH, ARCHITECT.

THESE plates are copied from *La Construction Moderne*.

DESIGN FOR CHRIST'S HOSPITAL SCHOOL, HORSHAM, ENG. MESSRS. ASTON WEBB & E. INGRESS BELL, ARCHITECTS.

THIS perspective view, copied from the *Builder*, was prepared by the architects for, and exhibited at, the last exhibition of the Royal Academy. The execution of the scheme itself stands in abeyance.

In their description of their scheme the architects say: "In dealing with such a problem as the one now before us, one's first impulse is towards a reproduction, with modifications of the traditional type of our university towns. The leading features of our great Mediæval seats of learning are familiar to all. The well-guarded entrance gateway for security and discipline, the enclosed 'quad,' with hall and chapel, master's house, cloistered walks and students' rooms, with further similar 'quads' beyond, round which are ranged libraries, museums and such like—these present a complete embodiment of the requirements of a great school all in proper order and due sequence. For security and control, for convenience of daily work and for economy of administration the Mediæval plan does not admit of improvement.

"But investigations into the conditions of healthy life show that this time-honored arrangement, as sketched above has one defect. It is insanitary. The enclosed 'quad,' with its four dead angles,

makes for the partial exclusion of sunlight and the stagnation of air, whereas an abundance of sunlight and the free movement of air about and around a building are now universally regarded as amongst the first requisites of health. So that the ideal arrangement from a sanitary point-of-view — and sanitary considerations must rule in this case — is not to be sought in the compactness and concentration of the Mediæval plan, but, rather, in its opposite, dispersion and segregation. If, however, this principle be pushed to extremes, the results would be, in the case of so large an establishment as Christ's Hospital, a practically unworkable plan. The true solution appears to lie in the division of the scheme into two sections, the residential portion and the working portion, and to treat each portion on its merits.

"Accordingly, in the plan now submitted, the residential portion has been extended along a southern frontage, the blocks separated by ample interspaces, and the working portion has been gathered up in the centre and disposed about a cloistered 'quad,' where the hall, chapel and schools are, with sufficient intervals between, placed.

"By this arrangement something of the architectural effect of the Mediæval treatment is retained, and with it the scholastic stamp. The working portion of the hospital is brought to a focus and the time of the working day is economized, while the residential portion is dispersed."

#### THE MERCERS' HALL STAIRCASE, LONDON, ENG.

THE black wainscot work of the handsome old hall of this, the leading Company, makes the interior of the famous building one of the most interesting still existing among the historic halls of the City of London; but, unfortunately, the apartment is so very dark that a photographic view is well-nigh out of the question, even during the clearest days in the summer. Indeed, the hall itself requires to be seen at night-time, when illuminated, to be properly examined in detail. The chapel occupies the site of the house of Gilbert à Becket, in which his son, Thomas, the murdered Archbishop of Canterbury, was born in 1119. To-day we show the new staircase, which was erected about 15 years ago, when the façade buildings in Cheapside were carried out from the plans of the late Mr. G. Barnes Williams, the Company's architect. The interior fittings were designed by the late Mr. J. G. Crace, and executed under his supervision. The staircase is reached from the principal entrance in Cheapside by way of a floridly-treated vestibule in oak, carried up some 14 feet high, and above that the walls are hung with leather. The ceiling and cornice, in imitation of oak framing, are carried out in plaster. The area of the staircase is about 45 feet by 20 feet on the ground-floor level, and the height is about 40 feet. The stairs are 8 feet wide, and have balusters with carved and fluted features, the newels being surmounted by sculptured lions bearing shields. One of these animals is seen in the accompanying view. The walls of the upper part of the staircase are lined with leather, and the oak frieze and cornices are relieved by gold and bronze enrichments. The lunettes are filled with three paintings, representing the Arts, Commerce and Industry, the remaining compartment being occupied by a window. In the middle of the ceiling occurs a painting of "Mercury," by Barrias. This hardly comes into our present picture. Below, a great feature is made of the ball chimney-piece, erected in stone, under the middle landing of the grand stairs. This plate is copied from *Building News*.

DESIGN FOR WEST HAM TECHNICAL INSTITUTE AND PUBLIC LIBRARY, ENG. MESSRS. ESSEX, NICOL & GOODMAN, ARCHITECTS.

YORKSHIRE PENNY BANK, BRADFORD, ENG. MR. JAMES LEDINGHAM, ARCHITECT.



BOSTON, MASS.—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895:* at the Jordan Art Gallery, 450 Washington St.

*Pictures by Ross Turner:* at Doll & Richards's Gallery, 2 Park St., opened January 16.

*Fifty-third Exhibition, Oil-paintings and Sculpture:* at the Boston Art Club, January 13 to February 15.

*Paintings and Water-colors by Edward C. Cabot:* at Chase's Gallery, 346 Boylston St., January 14 to 25.

*R. Caton Woodville's "1816":* at Williams & Everett's Gallery, 190 Boylston St.

BRIDGEPORT, CONN.—*Second Annual Exhibition of Pictures:* at the Public Library, January 25 to March 15.

CHICAGO, ILL.—*Paintings by August Franzen:* January 17 to 31, *Works by Gustave Doré:* January 21 to March 22, at the Art Institute.

CINCINNATI, O.—*Paintings of the "Glasgow School":* at the Art Museum, January 5 to February 2.

NEWTON, MASS.—*Exhibition of Pictures:* at the Newton Club, January 22 to 30.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Water-colors of Constantinople, Holland and Venice, by F. Hopkinson Smith:* at the Avery Galleries, 368 Fifth Ave., January 6 to 18.

*Exhibition of Japanese Paintings and Color Prints:* at the Fine Arts Building, 215 West 57th St., until February 5.

*Paintings by Maxime Maufra:* at the Durand-Ruel Gallery, 389 Fifth Ave., January 8 to 22.

*Exhibition of Competitive Drawings of Society of Beaux-Arts Architects:* at the Architectural League Rooms, Fine Arts Building, 215 West 57th St., January 16 to 18.

PHILADELPHIA, PA.—*Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts:* opens December 23, closes February 22. The Architectural Section of the Exhibition closes February 1.



TISSOT, ARTIST AND ARTISAN.—Of the art of Tissot, the younger generation of painters know little, for during the last ten years he has been represented in the annual exhibitions only at long intervals, and then by nothing other than an isolated portrait. In the early part of his career in France, and during his ten years' sojourn in England, he was known by pictures of a purely worldly character—ball-room scenes, garden-parties; portraits of fashionable women, like Lady Londonderry and the celebrated Lady Waldegrave, of men of rank and distinction—among them the Prince Imperial and the brilliant, ill-fated Captain Burnaby—with many other of the celebrities of twenty years ago. His powerful etchings, so well known, and by which alone he realized a fortune, have an additional value from the fact that they were always carefully printed by the artist himself, on his own press. He is also a skilful workman in enamels, bronzes and in the art of the goldsmith, the many beautiful objects which fill his magnificent studio testifying to his great versatility, as well as to life-long habits of unflagging industry. He has his own furnaces, where he carefully superintends the casting and all practical details of this last-mentioned sort of work, considering, as did Benvenuto Cellini and the master-workmen of his time, that the mind which conceives must be one with the hand that executes, and that to deliver a design, no matter how complete, into the hands of merely mechanical workmen, is inevitably to detract from its ultimate excellence.—"*Tissot's Life of Christ*," by Edith Cowes, in the *December Century*.

THE NEW JAPANESE CATHEDRAL.—When foreign architects visit Japan and see the Cathedral of Buddhism for the first time they are generally astonished at the magnificent structure. It is executed in pure Oriental style, and is richly ornamented with carvings. H. Ioto, a famous builder, of Nagoya City, designed it. The structure was commenced in 1878, and was completed last year. The cost has been estimated at seventeen million dollars. It would have greatly exceeded this amount had not numbers of Buddhists worked without any recompense. As the structure neared completion, the committee having the work in charge was much perplexed as to fire insurance. They found that no company would assume the risk on such a valuable wooden structure, the danger of destruction by fire being very great, and thus the premium would amount to an enormous sum of money. At last the committee decided on a design devised by Dr. Tanabe. Numbers of powerful fountains were constructed, both exterior and interior, which can be made to play on all parts of the structure at the same time. Usually only one great ornamental fountain is playing, rising to the great height of 157 feet. This is probably the largest artificial fountain in existence, emitting 82,080 gallons per hour. In case of fire, all the water pressure can be directed through numbers of exterior and interior fountains, thus every part of the structure, both inside and outside, could soon be drenched and any conflagration soon extinguished.—*Cincinnati Commercial Gazette*.

A FRENCH MARKING-STONE IN PENNSYLVANIA.—Isaac Yohe, of Monongahela City, has given to the Academy of Science and Arts of Pittsburgh the "French marking-stone," owned by him, recently discovered in Jefferson township, Allegheny County. The stone weighs almost five hundred pounds, is about four feet long and three feet broad. On its face is artistically carved the symbol of a cross, below which is chiselled out a cavity as a receptacle to hold a leaden plate bearing an inscription. This stone is undoubtedly the work of the early French discoverers of this region, and is such a stone as the early French surveyors were accustomed to place at well-known points in the Ohio Valley asserting their claims to the country. A leaden plate was placed within the cavity, on which was an inscription to the effect that the region belonged to the French. Unfortunately, the leaden plate in this stone had been removed when it was found, having been taken out probably years ago by the Indians or early white settlers to cast into bullets, not realizing or caring for the historical value it would some day possess. It is believed that this stone is one of those erected by the French force of two hundred men and thirty Indian guides which made an expedition down the Allegheny and Ohio Rivers in 1749, under Monsieur Celeron de Bienville, the commandant, coming from Canada by way of Niagara and Lake Erie.—*Pittsburgh Post*.

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JANUARY 25, 1896.



## SUMMARY:—

The National Academy of Design decides not to ally itself with the Fine-Arts Society. — The Character of its Present Building. — The Enlargement of the Building of the Metropolitan Museum. — Women to be admitted to Lectures at the Ecole des Beaux-Arts. — Sir Frederic Leighton becomes Lord Leighton. — The Proposed Balloon Expedition to the North Pole. — More Facts relating to Herr Lilienthal's Experiments in Flying. — The Berlin Sewerage System. — A German Model for a Contract between Owner and Builder. . . . .	37
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THE proposed scheme for having the National Academy of Design erect the new building which it will need after the first of next June, on the lot adjoining the building of the Fine-Arts Society, and to a certain extent in connection with it, has been abandoned, a majority of the members being opposed to anything which would seem to detract from the independence of the Academy. The decision was reached in a meeting attended by fifty-six out of the ninety Academicians, so that it may be considered as the expression of the prevailing sentiment of the entire body. What the Academy will do next remains to be seen. Every old New Yorker will be sorry to see the last of the pretty building, in which was embodied, not to say buried, so much aspiration after the higher architectural life, and will miss the pleasant galleries, which lent themselves so well to the receptions and other entertainments of the hospitable Academicians; and will hope that its new house may prove as interesting as the old one. It would be an excellent idea, by the way, to get Mr. Wight to write a history of the old building, with an incidental account of the Truth in Art movement, with which it was associated. While we are by no means so sure as Mr. Ruskin is, or was, of the connection between pointed arches and morality, or between pilasters and pride, there is, undoubtedly a close relation between the intensity of feeling of the artist and the beauty or impressiveness of his work. The Truth in Art movement in New York was a sincere and enthusiastic effort on the part of a certain number of artists to cut loose from shams and formulas, and do their work with perfect honesty, recurring to nature for inspiration. On the part of the architects it included also the principle of enlisting the interest of the workmen in the artistic development of the design, by allowing them to participate, to a certain extent, in the choice or execution of details of the work. This was done in the National Academy building, if we are not mistaken, by giving the carvers, for example, natural flowers, from which to model, under proper supervision, the capitals and string-courses; and, although the execution of these details is crude, compared with the splendid technique now displayed by some of the architectural carvers in New York, the work is extremely interesting, and in its way, beautiful, with a beauty of sentiment such as few modern buildings possess.

WE do not mean to say that the building is, as an architectural design, beyond criticism; on the contrary, the sarcasm that we once heard, that it is strange that such lofty motives should have evolved a building presenting a French Gothic front on one street, and an Italian Gothic façade around the corner, is not entirely without justification; but, notwithstanding any grammatical defects, the language that the building speaks is that of modest sincerity, combined with what might be called an affectionate desire to please, in a pretty and rustic way. A building with these characteristics is a rarity in this country, and its disappearance is to be deplored.

THE New York Legislature has appropriated a million dollars for the building of an addition to the Metropolitan Museum of Fine-Arts, and the work of construction will soon begin. The bill provided that the money must be expended within five years, but that not more than two hundred thousand dollars should be expended in any one year. The building will, therefore, proceed in that somewhat leisurely manner, which is, in theory, so necessary for the full development of the architect's ideal, and it may certainly be expected that the details will be well studied. Plans for the extension were made by the late R. M. Hunt, and were nearly completed at the time of his death; and his son, Mr. R. H. Hunt, has been commissioned to carry them into execution. The new extension will be T-shaped, the top of the T fronting Fifth Avenue. The design is in Classic style, and will be carried out, if possible, in white marble. The Fifth Avenue front is three hundred and four feet long, which is enough to give a very imposing effect.

MANY people will be interested to know that from January 1, 1896, women, from fifteen to thirty years of age, are admitted to the courses of lectures at the Paris School of Fine Arts. The subject of the admission of women to this school has been discussed for several years, but a strong party has always opposed any change. Lately, however, the opposition has been more feeble, and the Minister of Public Instruction has ventured to make a beginning by admitting them only to the oral courses. So far as architecture is concerned, the experience of the schools here, to which women are admitted as freely as men, indicates that the male students have little to fear from the competition of their sisters. It is not that the latter cannot do the work of the school as well as the men, for they generally surpass them in industry, and often in talent; but the professional life of an architect is too harassing for a woman's taste, and the number of women who practice architecture on their own account in this country is very small in comparison with that of those who are qualified to practice it, but who prefer the less trying duties of an assistant. In the other arts, women have already won so high a place that admission to the great French School does not add very much to their resources; but it will probably be regarded as a gratifying recognition of their ability.

SIR FREDERIC LEIGHTON, the courtly and accomplished President of the Royal Academy, has been raised to the peerage. Like the late Poet Laureate, Lord Tennyson, Sir Frederic has selected his own patronymic as the style of his new peerage and in so doing has shown a wisdom greater than that of Sir William Thomson, whose great fame is now hardly recognized as really belonging to Lord Kelvin. The *Builder* thinks this is the first instance of the elevation of an artist to the peerage in England, but it would be hard to find a person on whom such an honor would be more worthily bestowed.

THE famous balloon expedition to the North Pole is fairly in process of preparation. The money to pay for it has been raised, the volunteers who are to accompany the adventurous planner of the expedition are ready, and a contract has been made for the delivery of the balloon on May 11 next. The party will consist of M. Andrée, the leader, M. Eckholm, who is to make the astronomical and meteorological observations, and M. Strindberg, who will be the photographer of the expedition. The silk for the balloon is being tested at Lyons for strength and uniformity. Several thicknesses of it are to be glued together and the whole covered with varnish. The

net, from which the car is suspended, and the car itself, are being made in France, while the sails and guide-ropes are to be made in Sweden, under the personal direction of M. Andrée. The balloon is to be inflated with pure hydrogen, and as it would obviously be impracticable to transport it, already inflated, to the starting-point, portable sheds are to be constructed, which will be carried, together with the zinc and sulphuric acid for the production of the gas, to the place of departure. This is to be on one of the Nordkœama Islands, a little way from the northwest coast of Spitzbergen, and less than ten degrees distant from the Pole. If the balloon could be made to fly straight northward, the journey to its destination would thus be less than seven hundred miles long. The explorers count on being able to float in the air for fifteen days. This, with ordinary winds, ought to enable them to travel nearly four thousand miles, or, at least, five times as far as the direct distance to the Pole; so that, as they can, probably, in case of winds not quite favorable, direct their course, by means of their sails and guide-ropes, at a certain angle with current, they hope to be able to navigate themselves within sight, at least, of the earth's extremity, and, in the remaining time, reach some inhabited country, or, at least, find some whale-ship which will bring them home again.

THE Engineer Lilienthal seems to think that his fellow professionals will be interested in his scientific researches into the art of flying, and communicates his experiences very freely to the Berlin Society of Architects. Every one knows the courage with which he has pursued a task of great difficulty, and serious danger, a danger which he himself quite appreciates, for as he said in one of his lectures, the science of flying can only be learned by experience, while to fly unscientifically is to risk breaking one's neck. His view of the matter is, that man, being, as yet, the heaviest and clumsiest of all the birds, should, for the present, imitate only the flight of birds of a similar class, which consists mainly in jumping from a height, and landing safely, at a certain distance, on the ground. When this feat has become easy, the effort should be made to start from a height, and, passing through the air through a certain horizontal distance, reach a point as high as the starting-place. After this power has been attained, it will be a comparatively simple matter to fly upward from a starting-point on the ground.

SO far, his own attempts have been confined to jumping from an artificial hill, and landing on the ground as far from its summit as possible. In these efforts, he has sustained many bruises, and some worse injuries, the greatest difficulty, so far, that the flying-man has to encounter being to keep himself balanced, so as not to be inverted by the wind, and deposited on the ground on his head, instead of his feet. Quite recently, in order to guard better against the occurrence, he has substituted for the single broad wings with which his earlier experiments were made a sort of compound wing, consisting of several planes, one above another. It is obvious that, with such wings, the vertical distance between the centre-of-gravity and what may be called the centre of lifting power can be made much greater than is possible with simple wings, and that the stability of the whole will, therefore, be increased; but, while the compound wings seem, for this reason, well suited for horizontal or descending flights, the prospect of being able to flap them, so as to raise the body above the starting-point, does not seem very brilliant. However, as Herr Lilienthal says, the world is, in regard to navigating the air, in the condition of a baby just beginning to try to walk. For a long time yet, its efforts will end only in tumbles, but, little by little, the infant will learn to balance itself, to exert its powers judiciously, and, at last, to walk securely.

AS we have from time to time mentioned, the City of Berlin is drained by a very complete system of sewers, terminating in irrigation-fields of vast extent, far surpassing in size those which receive the sewage of Paris. At the beginning of the year 1874, there were no sewers in Berlin, although it had then a population of about eight hundred thousand. Moreover, the whole subject of the drainage of cities far from the sea was a matter of dispute, if not of despair. Paris, it is true, disposed of a small quantity of sewage by irrigation, at Gennevilliers; Edinburgh had a rather nondescript irrigation

system, and Dantzig disposed of its sewage upon fields which perversely refused to freeze, or give trouble otherwise, notwithstanding the predictions of the engineers unfavorable to irrigation; but it was generally agreed that such a system would, for various reasons, be inapplicable to a great city. However, it was necessary to do something for Berlin; and, as the sea was a hundred miles away, and chemical precipitation processes were too expensive to be practised on so large a scale, the German engineers decided to try irrigation on a great scale. The scheme which they planned is now fully carried out, and has already furnished Berlin, which has, meanwhile, increased in population until it numbers sixteen hundred thousand souls, with nearly five hundred miles of sewers, which carry the drainage of the houses and streets to a tract of twenty thousand acres of sandy land, where it serves to nourish the grass, turnips, potatoes and cabbages destined to feed, later, the people of the city. Notwithstanding the predictions of saturation of the soil, pestilence, infection carried through the sewage-fed vegetables, and so on, which were once so freely made in regard to sewage-irrigation, and the "observations" of people like a certain London professor, who, while visiting Gennevilliers, cut a stalk of celery, or some similar plant, and "saw a stream of sewage drip from the cut surface," the soil of the Berlin fields is not yet saturated, and gives no indication that it ever will be, although it receives more than two thousand million cubic feet of sewage every year; the effluent water, which is tested at regular intervals by the city's experts is as clean as ever; the air of the irrigation grounds, far from being malarious or pestilential, is so pure that the medical authorities of the city have established several convalescent homes there, which receive many patients and enjoy a high reputation among physicians. In the city itself, the effect of the completion of the system has been to reduce the annual mortality, from all causes, from thirty-two to twenty in a thousand, and the annual average of deaths from typhoid fever to one in ten thousand. This has been accomplished in spite of the fact that Berlin is the most crowded city in Europe, averaging seventy occupants to each house, while Paris has only fifty. The entire cost of the system, according to M. Launay, Chief Engineer of the Drainage System of the City of Paris, who was sent by the Prefect of the Seine to examine the Berlin works, and whose report is reviewed in *Le Génie Civil*, was about twenty-two million dollars, including the expense of the irrigation-fields; and it is so complete that, whereas twenty years ago not a single house in Berlin drained into a sewer, now fifteen hundred and sixty-four thousand people live in houses with sewer connection.

THE *Bautechnische Zeitschrift* gives a model of a contract between an owner and a builder, which is interesting, although very simple, no architect being mentioned, and many stipulations thought necessary among us being omitted. The provisions for completion and delivery of the work, and for a definite forfeiture in case of delay, are substantially similar to those in use with us; but the builder promises to carry out his work "according to the rules of the building art," and agrees to make good all damage and expense incurred by the owner on account of defects in the material or execution of the work undertaken by him, for two years from the completion and delivery of the work. This two-years' warranty does not, however, hold good in the case of alterations made subsequently to the completion of the building, by another mechanic; nor does it apply to damage due to the defective work of other mechanics employed in the building at the time of the execution of the contract work.

THE matter of arbitration of disputes is provided for by the stipulation that controversies in regard to the interpretation of the contract, or the execution of the work, if they cannot be settled otherwise, shall be referred to two arbitrators, one chosen by the builder, and the other by the owner; and that, if these fail to agree, a referee, who is agreed upon by the parties at the beginning, and is named in the contract, shall act with the arbitrators, and give the deciding vote. In regard to alterations, the stipulation is made that if by the wish of the owner, or on the proposition of the builder, changes from the plans or specifications are decided to be desirable, a written description of the change to be made, and a sum to be added to or deducted from the contract price for making it, must be agreed upon by the parties before it is carried out.



## THE PURCELL CENTENARY.



Old M. E. Church, Waterloo, N. Y.

IN a circular lately distributed, Dr. Purcell Taylor says, "The biographies of Henry Purcell would have been more reliable if their compilers had come to Purcell's descendants for their facts; the history of him and his family is known only to myself — the last of his race." Dr. Taylor should, however, remember that his great ancestor belongs to the nation, and that the nation is entitled to the facts.

In the meantime we are dependent on registers, letters, receipts, etc., — reliable so far as they go, for our knowledge of Purcell's life from the age of six.

The bi-centenary of this great musician's death was celebrated by an exhibition in the British Museum of a most interesting collection of portraits, engravings, letters and other relics; and by performances of his music in Westminster Abbey and elsewhere. The relics, strangely enough, were located in a sort of inner sanctum — badly lighted — to which admittance was gained by presentation of a visiting-card.

The portraits comprised one of Purcell, as a handsome and cheerful young man, by Kneller, presented by the original to Dr. Blow; two fine ones by Closterman; an unnamed but excellent drawing of the head only; and several engravings of the portraits.

Of all the paintings, undoubtedly the finest and most charming is one of Closterman's, representing the composer at the close of his too short life. He is depicted wearing his silk gown of office over a richly-embroidered coat, a lace cravat and ruffles; in the right hand he holds a roll of music — in form of baton. The face, oval in form with good features, bears the stamp of intellectual dignity and refinement, while the fine speaking eyes have a tinge of sadness, as well they might, for, by the somewhat attenuated cheeks one may surmise that the fell disease, consumption, which he doubtless inherited and of which he died at the age of thirty-seven, had already taken considerable hold on him. In this picture he wears a wig, whose long curls thrown back over the shoulders reach nearly to the elbow. The portrait is lent by the Royal College of Musicians. Two good portraits on view of Dr. Blow, by Lely, represent a kindly, trustworthy looking man at different ages — in the later one he also wears the long wig and magnificent lace.

Leaving the other relics, for the present we turn to more personal details, since we may not call them "facts." At St. Ann's Lane, Westminster, within a bow-shot of Whitehall, where Cromwell died in 1658, was born in the same year — though the day is unknown — Henry Purcell, the greatest composer England has possessed. He came of a musical stock, his father and uncle being distinguished musicians and members of the choir at Westminster Abbey. In Pepys's "Diary," among many allusions to the Abbey singers, we read, February 21, 1659, "Here I met Mr. Locke and Mr. Purcell [father of Henry], the composer of 'Masters of Musique.'" "We had a variety of brave Italian and Spanish songs." Mr. Purcell was a gentleman of the Chapel Royal, as we see from a cheque-book; whence also we learn that all the said gentlemen received four yards of fine scarlet cloth for cloaks, to wear at the coronation of Charles II. In 1663 he joined the King's private band, but died a year after, presumably a young man, and was buried in the cloisters — his son Henry, the

subject of this notice, being only six years of age. His uncle, Thomas Purcell, to whose guardianship he was left, had him at once admitted as a chorister of the Chapel Royal, and to the day of his own death always acted a father's part and, indeed, spoke of him as my "sonne" in a letter we shall quote later. Of this Thomas we have a record signed by Charles II in one of the Chapel Royal papers — "Whereas wee have made choice of Thomas Purcell to serve us in the office and place of one of our musitians in ordinary for the lute and voyce, and for the service and attendance . . . are pleased to allow him the images and Livery of six and thirty pounds, two shillings and sixpence by the year during his life." Pepys says in 1666, "So many of the musique are ready to starve, they have been five years behindhand for their wages."

Captain Cooke, Master of Choristers, was "a brave singer and composer" and Henry Purcell was eight years under him; and finally under Blow, on whose monument it is stated that "he was Master to the famous Henry Purcell." A noble and unselfish man, Dr. Blow had such recognition of the great talents of his pupils, Purcell and Jeremiah Clarke, that he resigned his own appointments in St. Paul's Cathedral and Westminster Abbey in order that they might fill them! It is touching to know that in 1695 he resumed the post of organist at the Abbey, which Purcell had held from 1680, and retained it till his own death in 1708. In "New Ayres and Dialogues," published in 1678, we find a song, "Sweet Tyranness," which there is no doubt was composed by Purcell at the age of nine. At eleven he tried his powers in "The Address of the Children of the Chapel Royal to the King, and their Captain Cooke, on His Majesty's Birthday, A. D. 1670." Many of his anthems now in use were composed while he was under Cooke's tuition. In 1676 he was appointed copyist to Westminster Abbey, which post he resigned two years later in order to have more time for study and composition, and was succeeded by one of the minor canons. In 1679, from the following curious letter, we see that he was busily engaged: "This ffor Mr. John Gostling, Chauter of y<sup>e</sup> quire of Canterbury Cathedral London y<sup>e</sup> 8th of feb. Sir, I have received y<sup>e</sup> favor of yours of y<sup>e</sup> 4th with y<sup>e</sup> inclosed for my sonne Henry: I am sorry wee are like to be without you soe long as yours mentions: but 'tis very likely you may have a summons to appeare among us sooner than you imagine: for my sonne is composing wherein you will be chiefly concerned. However, your occasions and tyes where you are must be considered and your conveniences ever complied withall: in y<sup>e</sup> meantime assure yourself I shall be carefull of your concerns heir, by minding and refreshing our master's memory of his Gratiouns promis when there is occasion," etc.

By fifteenth of May, 1681, Purcell was married, as his wife Frances is witness to a power-of-attorney given by old Thomas Purcell, and in August, 1682, their first child was born, a month after his appointment as organist of the Chapel Royal and a few days after the uncle's funeral.

At the end of an anthem — one of a volume in his handwriting — he wrote "God bless Mr. Henry Purcell. September y<sup>e</sup> 10th, 1682." Of their six children, the first three died in infancy.

To estimate his genius aright we must recall the condition of the musical artistic world in which he lived. He had no models in orchestration but was familiar with all the viols. Though Charles I had introduced the violin from France it was not at all popular.

A writer from Oxford speaking of the year 1657 says: "Gentlemen in private meetings which I frequented played three, four and five parts with viols, with an organ, virginal or harpsichord joined to them; and they esteemed a violin to be an instrument only belonging to a common fiddler, and could not endure that it should come among them for fere of making these meetings to be vain and fiddling."

Gostling, now in London, was very fond of the *viol de gamba* which Purcell detested so much, that he composed the following round for three voices and gave to him:

"Of all the instruments that are,  
None with the viol can compare  
With a whet, whet, whet, and a sweep, sweep, sweep,  
But above all this still abounds  
With a zingle, zingle, zing and a zit zam sounds."

Charles II was very fond of Gostling, and once said, "You may talk as much as you please of your nightingales, but I have a *gostling* who exceeds them all."

Gostling was famous for the extraordinary depth of his bass voice, and at his request Purcell composed an anthem on extracts from the Psalms, showing the terrors and wonders of the sea, and he so adapted it to his friend's voice that scarcely any one but himself then or since could sing it.

Purcell had a dislike to publishing; however, he did occasionally do so — by subscription, and a notice was put in the *London Gazette* of May 24, 1683, informing subscribers that if they had not paid by June 11 the ten shillings, "the books would not be sold after under 15s. the sett." This did not leave much after paying engraver and printer.

The title of this work, which was exhibited, is "*Sonnatas of III parts, Two Viollins and Basse, to the Organ or Harpsichord, composed by Henry Purcell, Composer in Ordinary to his most sacred Majesty and Organist of his Chappell Royall of London.*" To the King he writes a most humble dedication in laying it "at your Sacred feet"; and a modest preface to the Ingenious Reader, in which he explains some "unusual terms of Art," *e. g., adagio, piano.*

After his death "Madam" Purcell published three successive collections of his works, speaking most affectionately in her "dedications" of her husband, whom she survived many years. In the dedication of "The Prophetess" Purcell says, "Musick is yet but in its nonage—a forward child which gives hope of what may be hereafter, when the Masters of it shall find more encouragement." Dryden says of the music to his "King Arthur," "There is nothing better than what I intended, but the Musick, which has arrived at a greater perfection in England than ever formerly, especially passing through the artful hands of Mr. Purcell, who has composed it with so great genius that he has nothing to fear but an ignorant and ill-judging audience." The solo and chorus, "Come if you dare," from "King Arthur," is to this day one of the most effective displays a tenor could wish. It is frequently heard. By virtue of his court appointment Purcell had a room in the clock-tower of St. James's Palace, and here Dryden once lived in perfect safety from arrest from debt.

Of all Purcell's chamber music—designed quite as much for the enjoyment of those who played it (the old notion) as of those who listened to it (the new one)—his "Golden Sonata in F" so-named by his admirers, has been reckoned the finest specimen since the day it was given to the world. The original manuscript was lent to the Museum by the Queen. Numerous odes in honor of royal persons were composed—one in honor of James II, "Why are all the Muses mute?" Some two years after, he wrote a "Quickstep" which became so popular that it was afterwards selected for the absurd words of "Lillibulero," hitting at the Irish and the Papists; and it is said that the song contributed not a little towards the Revolution of 1688. The tune is not played by military bands in Ulster.

"When Handel came he made great use of Purcell; such excellent use, indeed, that he drove Purcell's essentially English music out of fashion with the English people, and built hundreds of his phrases up into structures as different from the music of Purcell, as Milton is different from Herrick."

It was a strange coincidence that the composer of so many odes on St. Cecilia's Day should have died on the eve of that day. As he lay dying he may possibly have heard some faint murmurs of the evening service, in which the psalm for the day concluded with the words he had set to music, still unsurpassed in truthfulness and dignity—

"Blessed be the Lord God of Israel."

At his bedside were his aged mother, his young wife and three infant children. He was sincerely loved and mourned by relatives and friends. His ode, sung at the funeral of Queen Mary, was a few months after sung at his own.

In an extract from an autograph letter by Dr. Wesley, 1830, shown, we read: "His immortal Church Service in B-flat is very rarely (if ever) sung in Westminster Abbey, St. Paul's Cathedral or the Chapel Royal."

He was a close analogy to Shakespeare in his own faculty of exciting emotions of every kind by his magical and marvellous modes of expression on all occasions. He is, indeed, a superb acquisition to our country; and whose manifold and magnificent powers may fairly excuse the hyperbolic eulogy in his epitaph, "He is gone to that place where only his Harmony can be exceeded."

As regards the performance of the works of the master on this centenary occasion, far from unqualified praise can be given to them. The grandest performance was in the Abbey, the choir being augmented by choristers from many London churches and from Bangor Cathedral; and the greater part of the service was ably conducted by Dr. Bridges. Purcell's fine setting of the "Te Deum" was sung in its original form, and his solemn setting of "Remember not our offences." Before Dean Bradley's address a procession was formed and some wreaths from the Purcell Society, the Royal Academy of Music and the Royal College of Music, and one from the choristers were laid on Purcell's grave in the north aisle near the organ. The dean described Purcell as coming on the scene when a representative of the higher music was sorely needed. Purcell's one opera, "Dido and Æneas," was played by the pupils of the Royal College of Music.

All the celebrations have taken place under the auspices of the Purcell Society, who have brought out a complete edition of his works.

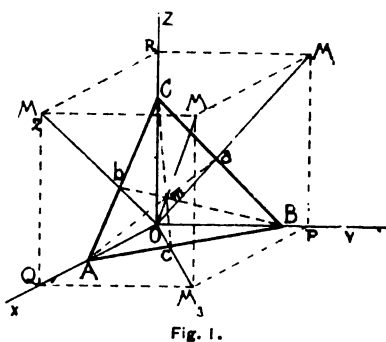
The proceeds of the high charge for seats at the Abbey are to go towards a memorial in the form of a new organ-case designed by Mr. Pearson, R. A., the cost of which is estimated at £2,000.

Among the relics there was a large collection of autograph music; the music of the verse in an ode on St. Cecilia's Day, in 1692, in which Purcell sang the alto solo, "Tis Nature's Voice," with all the "incredible graces," "exactly engraved" by Thomas Cross; a receipt of Purcell's for £2 allowed him yearly in lieu of house; a bill settled by Sir Christopher Wren "for a trunk of whole deal; for a scafferling to y<sup>e</sup> organs and cutting stuff to waste & labor & nails sixteen shillings."

THE MISSISSIPPI STATE-HOUSE.—Recent investigations of the condition of the State Capitol of Mississippi have shown that it is unsafe. Experts say it is likely to collapse at any time. — *Exchange*.

## A GENERAL METHOD OF PERSPECTIVE.

BY DIRECT PROJECTION.



THE ordinary method of perspective by direct projection, which gives the perspective of an object from its projections upon three planes perpendicular to each other, would be more extensively used if these three planes of projection could be taken in any direction whatever. But this method applies only when one of the planes of projection is parallel to the plane of the picture, the other two being

perpendicular to it. If the object to be represented is a building, its main lines are not usually parallel to the plane of the picture, so that oblique elevations of the building must be traced on two planes respectively parallel and perpendicular to the picture,<sup>1</sup> before the method can be applied.

It is to do away with these two oblique elevations that the present method is proposed, so as to enable the architect to use the plans and elevations prepared by him, even when the main lines of the building are oblique to the plane of the picture.

This kind of perspective may be called "Trilinear Perspective," on account of the geometrical considerations upon which it is based.

"As perspectives are not made from objects themselves, but from adequate substitutes for them, and as projections alone perfectly furnish such substitutes, every system of perspective, that is not expressly based on the theory of projections, is more or less inelegant, tedious, blind and cumbersome."<sup>2</sup>

The best system is, therefore, for architects, at least, the one which gives the perspective of a building directly from its projections upon three planes perpendicular to each other (which, for convenience, will be supposed to pass through the point-of-sight).

These three planes intersect each other along three lines,  $ox$ ,  $oy$ ,  $oz$  (Fig. 1), perpendicular to each other and passing through the point-of-sight,  $o$ . The plane of the picture may occupy any position whatever with respect to the axes,  $ox$ ,  $oy$ ,  $oz$ , because these axes are parallel to the main lines of the building and not to the plane of the picture. The lines,  $ox$ ,  $oy$ ,  $oz$ , will be called the *principal axes*, as they determine the three fundamental directions, and the planes of projection,  $yo$ ,  $zo$ ,  $xo$ , will be called also the *principal planes*. The fundamental directions being not parallel or perpendicular to the picture, we shall have to consider three cases:

1. *None of the principal planes are perpendicular to the plane of the picture.* In this case the latter plane cuts the principal planes along three lines,  $AB$ ,  $BC$ ,  $CA$ , forming a triangle,  $ABC$ , in the plane of the picture. All constructions will be hereafter referred to this triangle, which for this reason may be called the "*triangle of reference*," while its sides indefinitely produced will be called the "*lines of reference*."

2. *One and only one of the principal planes is perpendicular to the plane of the picture (Fig. 4).* The lines of intersection of the latter plane with the principal planes are now  $AB$ ,  $AC'$  and  $BC''$  ( $AC'$  and  $BC''$  being parallel to  $oz$ ). Since parallel lines are supposed to meet at infinity, there is no difference between this case and the first case, except that the vertex  $C$  of the triangle of reference is removed to infinity on the axis  $oz$ . The three lines,  $AB$ ,  $AC'$  and  $BC''$ , are the three lines of reference.

3. *Two of the principal planes are perpendicular to the plane of the picture (Fig. 6).* In this case the plane of the picture is perpendicular to  $ox$  and parallel to the plane  $yo$ ; hence it meets the planes  $xoy$  and  $xoz$  along the lines  $AB'$  and  $AC'$  (respectively parallel to  $oy$  and  $oz$ ), but it does not meet the plane  $zoy$ . Since parallel planes are supposed to meet at infinity, there is no difference between this case and the first case, except that two of the vertices of the triangle of reference are now removed to infinity,

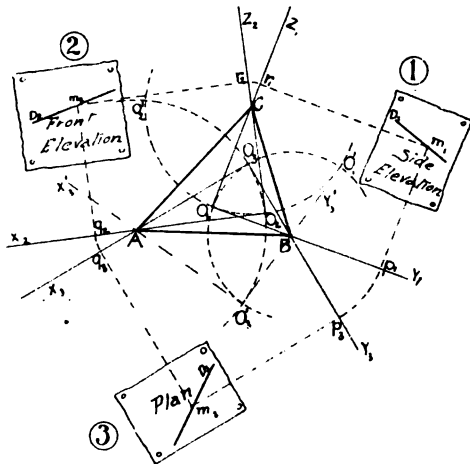


Fig. 2.

<sup>1</sup> See: William R. Ware, "Modern Perspective," New York, 1896, p. 215.

<sup>2</sup> Preface to "Linear Perspective," by S. Edward Warren, New York, 1887.

i. e., the vertex  $B$  is at infinity on  $oy$ , and the vertex  $C$  is at infinity on  $oz$ . In other words, the line of reference,  $BC$ , is at infinity in the plane  $zoy$ , so that all that is left of the triangle of reference are the two sides,  $AB$  and  $AC$ .<sup>1</sup>

From what has been said, we may consider the last two cases as particular cases of the first one. Consequently, the ordinary method by direct projection, which corresponds to the third case, is simply a particular case of trilinear perspective.

The trilinear perspective is based upon the following theorem: If any ray  $OM$  be drawn through the point-of-sight  $O$  (Fig. 1) and if this ray be projected on the three principal planes in  $OM_1$ ,  $OM_2$ ,  $OM_3$ ; these three projections will intersect the corresponding sides of the triangle of reference at certain points,  $a, b, c$ ; and if these points be joined to the opposite vertices,  $A, B, C$ , the three lines thus obtained will meet in a common point,  $m$ , which is the intersection of the ray  $OM$  with the plane of the picture.

To prove this, observe that the projection  $OM_1$ , for instance, is obtained by taking any point  $M$  on  $OM$  and projecting it in  $M_1$  on the plane  $YOZ$ ; the line  $MM_1$  is then parallel to  $OX$  and lies therefore in the plane  $XOM_1$ ; both points  $O$  and  $M$  being in the plane  $XOM_1$ , this plane contains the ray  $OM$ , but it contains also the line  $Aa$  since the points  $A$  and  $a$  are respectively on  $OX$  and on  $OM_1$ ; hence  $Aa$  must meet  $OM$ ; it can be proved in the same manner that  $Bb$  and  $Cc$  must meet  $OM$  also. On the other hand

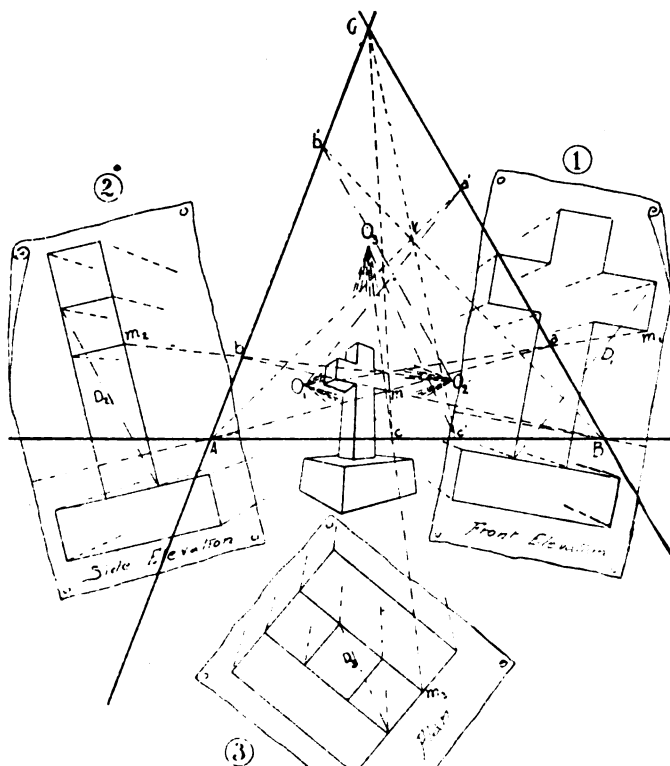


Fig. 3.

the lines  $Aa, Bb$  and  $Cc$  are in the plane of the picture, so that their point of intersection with  $OM$  is necessarily the point  $m$  where  $OM$  cuts the plane of the picture.

1. *Perspective of Points*: According to the preceding theorem, the perspective of any point  $M$  given by its three projections ( $M_1, M_2, M_3$ ) is obtained by drawing the lines  $OM_1, OM_2, OM_3$ , and joining the points  $a, b, c$  thus obtained to the opposite vertices of the triangle of reference.

The only difficulty which remains to be overcome is that the principal planes do not coincide with the plane of the picture, while only one plane can be used in making a drawing. But the point-of-sight and the triangle of reference form a pyramid whose lateral faces,  $OAB, OBC, OAC$ , can be revolved around the corresponding sides of the base  $ABC$  until they be brought into the plane of the picture; this will not affect the method of obtaining the perspective of a point, because the points  $a, b, c$  lie on the axes of rotation, so that their position is not altered.

Figure 2 shows how the three principal planes are brought into the plane of the picture: if we suppose that the position of the latter plane is defined by the length of the edges  $OA, OB, OC$ , (of Fig. 1), the sides of the triangle of reference are easily obtained, since these sides are the hypotenuses of the right triangles  $OAB, OBC, OAC$ ; the triangle  $ABC$  can then be drawn, so also the

triangles  $O_1BC, O_2CA, O_3AB$ , which represent the three lateral faces of the pyramid revolved into the plane of the picture. It is obvious that the points  $O_1, O_2, O_3$ , are determined by three arcs of circle drawn respectively with  $A, B, C$  as centres and  $OA, OB, OC$  as radii. These three points will be called the "principal points."

If we suppose that the projections of the building were drawn upon the principal planes, before they were revolved, these projections

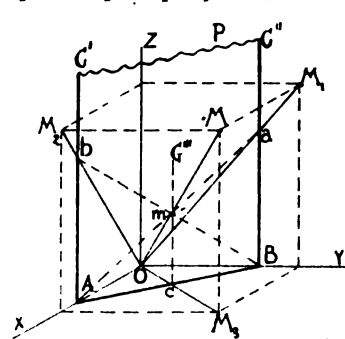


Fig. 4.

will be brought by the rotation, into the plane of the picture and will have their main lines parallel to the corresponding set of axes; for instance, in Figure 2 the plan of the building has its main lines parallel to the axes  $O_1X_1$  and  $O_1Y_1$ ; in the same way the front elevation is referred to the axes  $X_2, O_2, Z_2$ , and the side elevation to the axes  $Y_3, O_3, Z_3$ . (The plan and the elevations are supposed to have been drawn on separate sheets of paper before being fixed in their respective positions.)

Any point  $M$  of the building has now its three projections  $m_1, m_2, m_3$ , in the plane of the paper; according to the preceding theory the perspective of the point  $M$  is obtained by joining each projection of the point to the corresponding principal point; this gives the lines  $o_1m_1, o_2m_2, o_3m_3$  (Fig. 3), which determine on the corresponding lines of reference the points  $a, b, c$ ; these points being joined to the opposite vertices,  $A, B, C$ , the three lines thus obtained meet in a common point,  $m$ , which is the perspective required.

In practice, two of the projections are sufficient to determine the perspective of each point.

It may be remarked here that any one of the principal planes can be brought into the plane of the picture in two ways according to the sense of the rotation; this is also shown by the fact that the arcs of circle, which determine the principal points ( $o_1, o_2, o_3$ ) cut each other again in three other points ( $o'_1, o'_2, o'_3$ ) (Fig. 2), which could just as well be taken as principal points; for instance, if found more convenient, the plane  $XOY$  can be revolved towards the outside, in this case the principal points would be  $o_1, o_2, o'_3$ , and the plan of the building would be referred to the axes  $X'_1, O_1, Y'_1$ . One may take advantage of this fact, to keep the three projections from interfering with each other or with the perspective drawing.

Figure 3 shows the perspective of a cross: the three sets of axes are not shown, because as soon as the plan and elevations are put in their place, everything can be dispensed with except the three lines of reference and the three principal points.

In practice only one line need to be actually drawn to find the perspective of any point: take for instance the point  $m_2, m_3$  (Fig. 3); place the straight-edge on the points  $o_2$  and  $m_2$ , and without tracing any line, place the pencil at  $b$ ; holding the point of the pencil steady, let the straight-edge turn around  $b$  until it reaches  $B$ , then draw  $bB$ ; in the same way place the straight-edge on the points  $o_3$  and  $m_3$ , and the pencil at  $c$ , turn the straight-edge around  $c$  until it reaches  $C$ , this will show where  $m$  lies on the line  $bB$ , so that  $bB$  is the only line which has to be drawn to determine  $m$ .

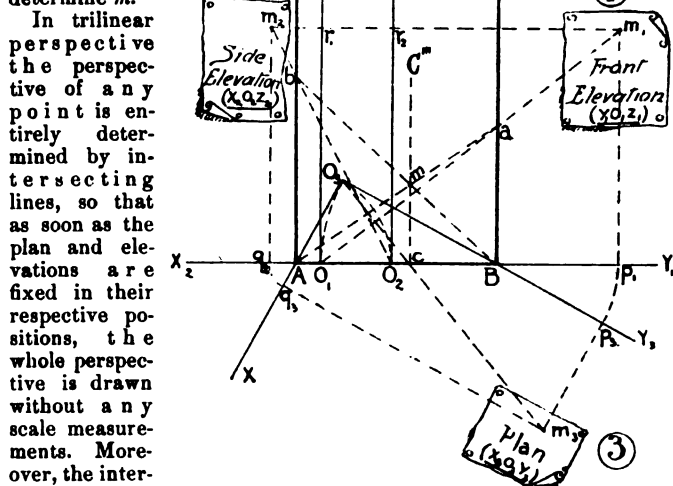


Fig. 5.

In trilinear perspective the perspective of any point is entirely determined by intersecting lines, so that as soon as the plan and elevations are fixed in their respective positions, the whole perspective is drawn without a scale measurements. Moreover, the intersecting lines never cross each other under a small angle, so that their points of intersection are always well determined. Finally, each point being determined independently, it is not necessary to put the whole plan in perspective, as is usually done, but only the parts of the building, which are seen from the point-of-sight.

Comparing Figures 1 and 2 it is obvious that:

$$OP = o_1p_1 = o_3p_3$$

$$OQ = o_2q_2 = o_3q_3$$

$$OR = o_1r_1 = o_2r_2$$

<sup>1</sup>In the book referred to before, Mr. Ware divides the subject of perspective into the same three cases and calls them "Three-point perspective," "Two-point perspective" and "One-point perspective"; but he takes these cases in the reverse order, i. e., he first establishes the laws of perspective by taking the fundamental directions parallel and perpendicular to the plane of the picture, as is usually done; these laws are then applied and extended to the other cases. We shall, on the contrary, begin by the general case and dispense with such notions as the "line of the horizon," the "centre of the picture," the "points of distance," etc.

But we have also:

$$O_1 B = O_2 B \quad O_2 A = O_3 A \quad O_1 C = O_3 C$$

Hence by subtraction:

$$B p_1 = B p_2 \quad A q_2 = A q_3 \quad C r_1 = C r_3$$

It follows from this that to pass from one projection to another, as for instance from  $m_1$  to  $m_2$ , one must draw  $m_1 p_1$  parallel to  $o_1 z_1$ , then take  $B p_2 = B p_1$ , and draw through  $p_2$  a parallel to  $O_2 X_2$ .

2. *Perspective of Straight Lines:* The perspective of a straight line is determined by the perspective of any two of its points. The line  $D$  being given by its three projections ( $D_1, D_2, D_3$ ) (Fig. 2),

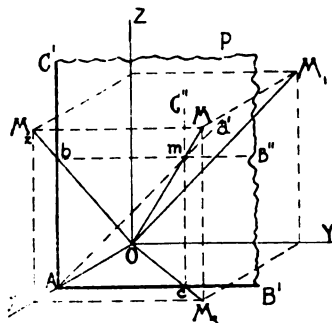


Fig. 6.

we may take an arbitrary point  $m_1$  on  $D_1$  for instance; the other two projections of this point are readily found, as we have shown how to pass from  $m_1$  to  $m_2$  or from  $m_1$  to  $m_3$ , and as we know further that  $m_2$  and  $m_3$  lie respectively on  $D_2$  and  $D_3$ . The three projections of a point of  $D$  being thus obtained, this point is put in perspective, and the operation is repeated for a second point. The two points can be taken anywhere on  $D$ ; the further apart they are, the better is the line determined; for this reason we may take one of the points at infinity on  $D$ ; its perspective will then be the vanishing point of  $D$ . The method will still be the same, only the projections  $m_1, m_2, m_3$  of the point will be at infinity on  $D_1, D_2, D_3$ , so that the lines  $o_1 m_1, o_2 m_2, o_3 m_3$ , used in finding the perspective of this particular point, will be obtained by drawing through the principal points three lines respectively parallel to  $D_1, D_2, D_3$ . The rest of the construction is not altered, hence the general rule:

To find the vanishing point  $V$  of any straight line given by its three projections  $D_1, D_2, D_3$  (Fig. 3), draw lines through the principal points ( $o_1, o_2, o_3$ ) respectively parallel to  $D_1, D_2, D_3$ ; take their intersections with the corresponding lines of reference and join the points  $a', b', c'$  thus obtained to the opposite vertices  $A, B, C$ ; this gives three lines passing through the required vanishing point  $V$ .

It follows that all lines parallel to  $D$  in space have the same vanishing point  $V$ , so that the perspective of all these parallels must pass through  $V$ .

The vanishing point of a direction may be regarded as obtained by drawing through the point-of-sight a ray parallel to the given direction and taking its intersection with the plane of the picture, by means of the fundamental theorem; this would lead precisely to the same construction. According to this remark, the vertices  $A, B, C$  are obviously the vanishing points of the three principal directions. (Fig. 1.)

3. *Perspective of Planes:* A plane can be represented only by two or more straight lines intersecting each other. If a plane be drawn through the point-of-sight parallel to a given plane, its intersection with the plane of the picture is called the *vanishing line* of the given plane, and is determined by the vanishing points of any two lines lying in the given plane. It follows from this that the vanishing lines of the principal planes are the lines of reference  $AB, BC, AC$  (Fig. 1). In trilinear perspective, therefore, the fundamental lines of the drawing are the vanishing lines of three planes parallel to the three faces of the object to be drawn and no particular attention is paid to the line of the horizon or to the centre of the picture; however, it may happen in certain cases that one of the lines of reference coincides with the usual line of the horizon.

4. *Perspective of Curves:* Suppose a curve  $G$  to be given by its three projections  $G_1, G_2, G_3$ ; if we take any point  $m_1$  on  $G_1$  for instance, the other two projections  $m_2, m_3$  of this point must be respectively on  $G_2$  and  $G_3$  and are found without difficulty. The three projections of the point being determined, its perspective is obtained by the general method and these operations are repeated with other points of the curve  $G$  until its perspective is sufficiently well determined.

Having now completed the study of the general case of trilinear perspective, little remains to be said concerning the two particular cases previously mentioned. The first of these cases is the one in which the plane of the picture is parallel to  $OZ$  and is of special importance to architects, since the plane of the picture is usually supposed to be

vertical, i. e., parallel to one of the main lines of the building. The general method is immediately applicable to this case, the only difference being that two of the lines of reference ( $AC'$  and  $BC''$ ) are now parallel to each other (Fig. 4), so that their point of intersection  $C$  is removed to infinity in the direction  $OZ$ . Hence, the only modification to be done in the fundamental theorem is that the line  $cC$  must be replaced by a parallel to  $OZ$  drawn through the point  $c$ .

When the planes  $XOZ$  and  $ZOY$  are revolved respectively around  $AC'$  and  $BC''$ , both  $OX$  and  $OY$  fall on  $AB$ , i. e., the principal points  $o_1$  and  $o_2$  are now on the line of reference  $AB$  (Fig. 5); the third principal point,  $o_3$ , is obtained by drawing two arcs of circles with  $A$  and  $B$  as centres and  $o_1 A, o_2 B$  as radii. As  $O_1 Z_1$  is parallel to  $O_2 Z_2$ , the two projections  $m_1$  and  $m_2$  of a point lie now on a line parallel to  $AB$ .

It may be stated here again that each principal plane can be brought into the plane of the picture in two ways; in Figure 5 the three planes are revolved towards the inside of the triangle of reference, but they could just as well be revolved in the opposite direction.

According to the general theorem properly modified to obtain the perspective of a point  $M$  when the plane of the picture is parallel to  $oz$  (Fig. 5), join the principal points ( $o_1, o_2, o_3$ ) to the corresponding projections of the point ( $m_1, m_2, m_3$ ); this determines the points  $a, b, c$  on the lines of reference; join  $a$  and  $b$  to the opposite vertices,  $A$  and  $B$ , and draw through  $c$  a parallel to  $AC'$ ; the three lines,  $aA, bB$  and  $cC''$  thus obtained will pass through the required point  $m$ .

All that has been said concerning the perspective of straight lines, their vanishing-points, the perspective of curves, etc., is immediately applicable to this case, and need not, therefore, be repeated here.

The second particular case of trilinear perspective is the case in which the plane of the picture is parallel to one of the principal planes, i. e., to one of the faces of the building.

The only difference between this case and the general case is that the line of reference,  $BC$ , is now at infinity in the plane of the picture, so that the fundamental theorem is still true, provided that the lines  $bB$  and  $cC$  be considered as lines drawn through  $b$  and  $c$  respectively parallel to  $oy$  and  $oz$  (Fig. 6), and that the line  $Aa$  be considered as a line drawn through  $A$  parallel to  $OM_1$  (because the point  $a$  where  $OM$  intersects  $BC$  is now at infinity on  $OM_1$ ).

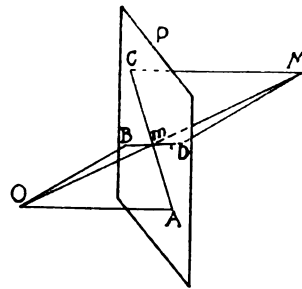


Fig. 8.

shown in Figure 7. The two projections,  $m_1$  and  $m_2$ , of any point  $M$  lie on a parallel to  $AB'$ , while the projections  $m_1$  and  $m_2$  are on a parallel to  $AC'$ .

Here, again, the rotations of the planes  $XOY$  and  $XOZ$  can take place in two ways, but the translation of the plane  $YOZ$  can be done in only one way.

According to the general theorem properly modified to obtain the perspective of a point  $M$  when the plane of the picture is parallel to the plane  $YOZ$ , join the principal points ( $o_1, o_2, o_3$ ) to the corresponding projections of the point ( $m_1, m_2, m_3$ ); this determines the points  $b$  and  $c$  on the lines of reference; through these points draw parallels to  $AB'$  and  $AC'$ ; the lines  $bB'$  and  $cC'$  thus obtained are found to intersect each other on the line  $o_1 m_1$ , and this common point of intersection is the required point  $m$ .

Any two of the three projections would, of course, be sufficient to determine the perspective of a point.

All that has been said previously concerning the perspective of straight lines, curves, etc., is applicable here without modification; but as we remarked at the beginning, this last case of trilinear perspective leads to the same results as the ordinary method by direct projection, because in this case the planes of projection are all parallel or perpendicular to the plane of the picture.

*Conclusion:* If two straight lines meet in space, it is obvious that the point of intersection of their perspective is the perspective of their point of intersection.

With the aid of this proposition the fundamental theorem can be looked at from a different point of view: if we go back to Figure 1 is evident that point  $a$  is the perspective of  $M_1$ , and point  $A$  the vanishing point of  $MM_1$ , so that the line  $Aa$  is the perspective of  $MM_1$ ; in the same way  $Bb$  and  $Cc$  are the perspectives of  $MM_2$  and  $MM_3$ ; and since the three lines  $MM_1, MM_2, MM_3$  pass through  $M$ , the three lines  $Aa, Bb$  and  $Cc$  must pass through the perspective of  $M$ . Hence this theorem does not involve any new

<sup>1</sup> It is already well known that  $m_3$  being the horizontal projection of a point  $M$  in space, the perspective of this point must be on the vertical line  $cC''$ , drawn through the point  $c$  where the ray  $o_3 m_3$  intersects  $AB$ ; but the rest of the construction differs from the ordinary methods of perspective, as the trilinear perspective is the only method which treats the three projections alike.



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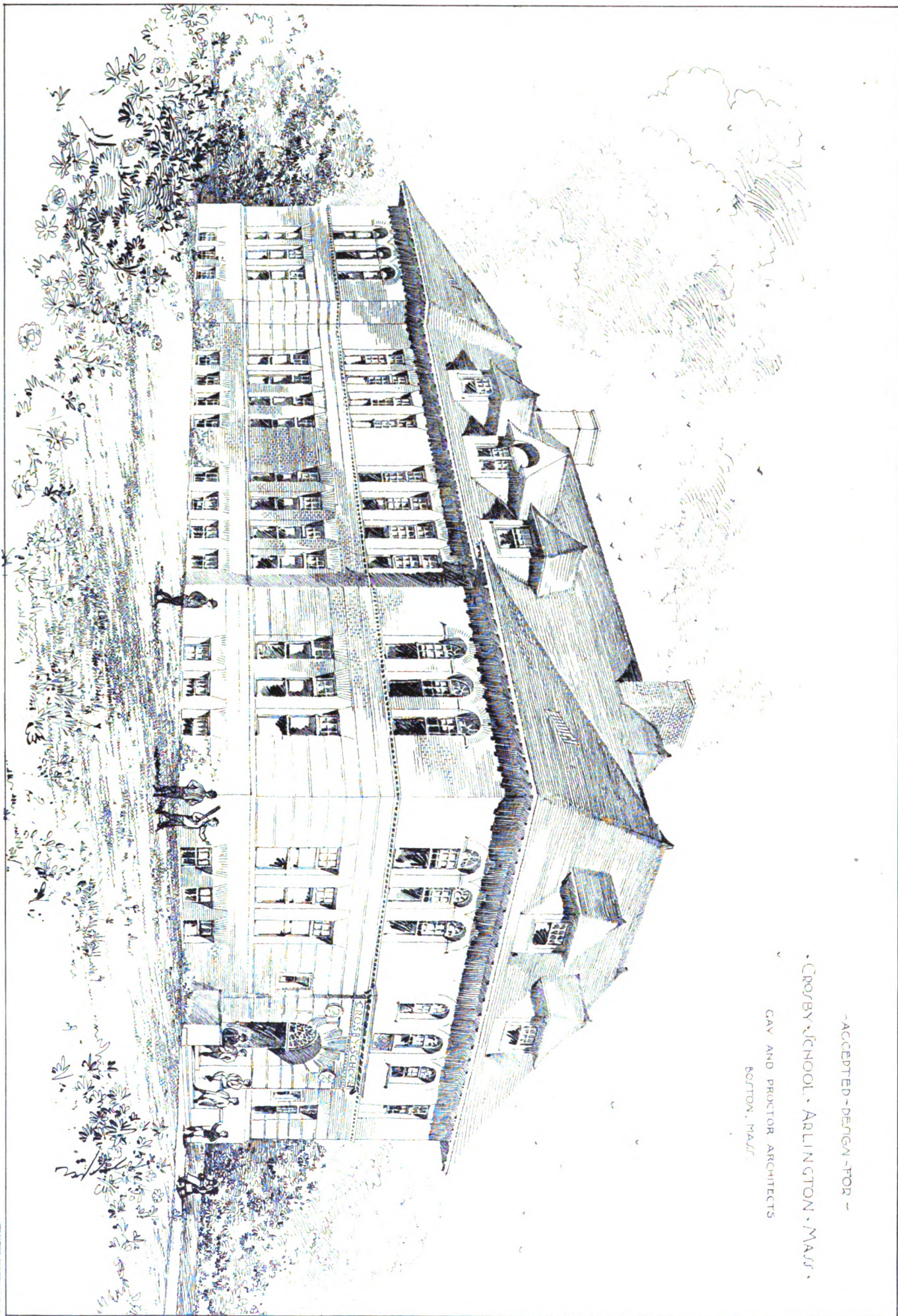
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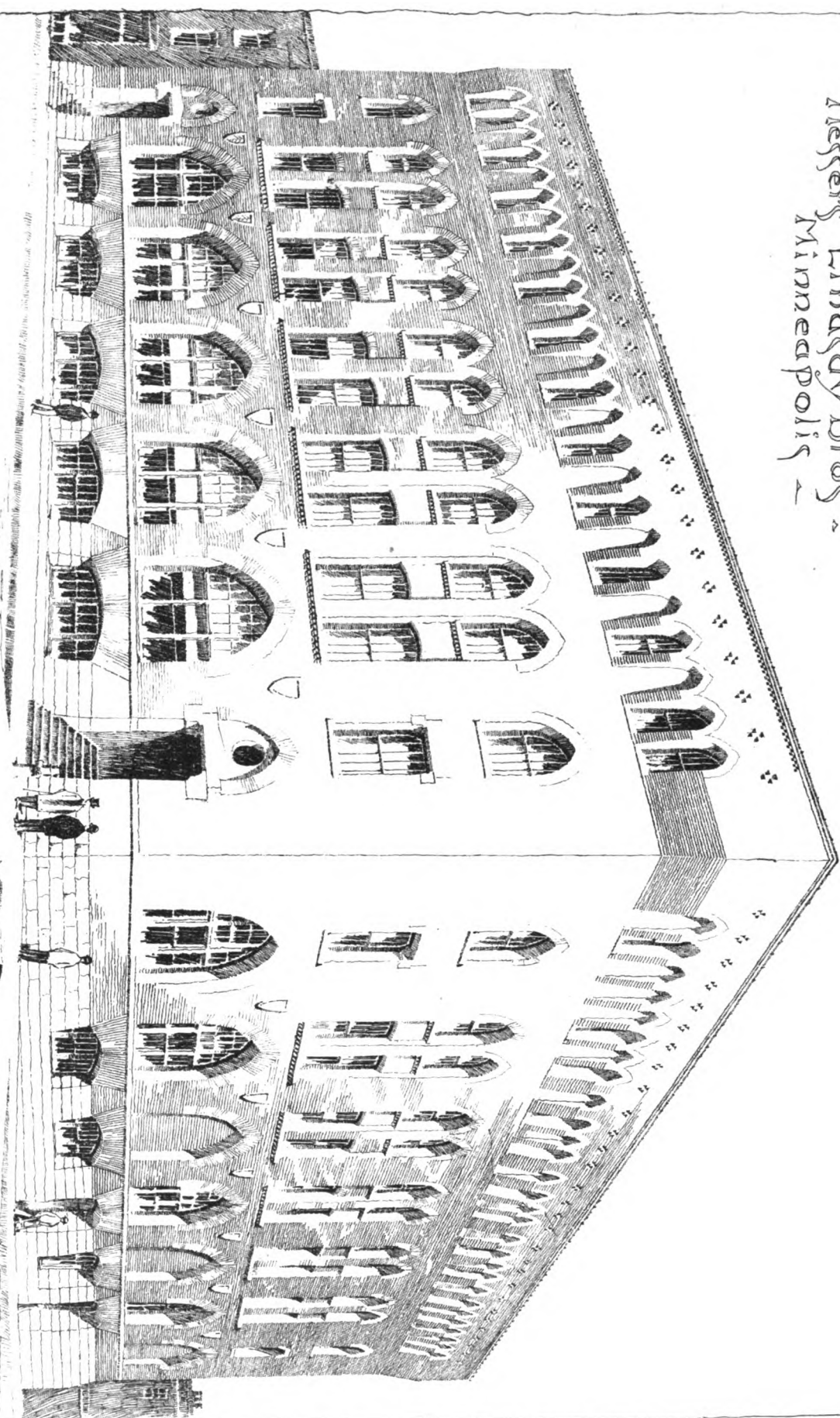
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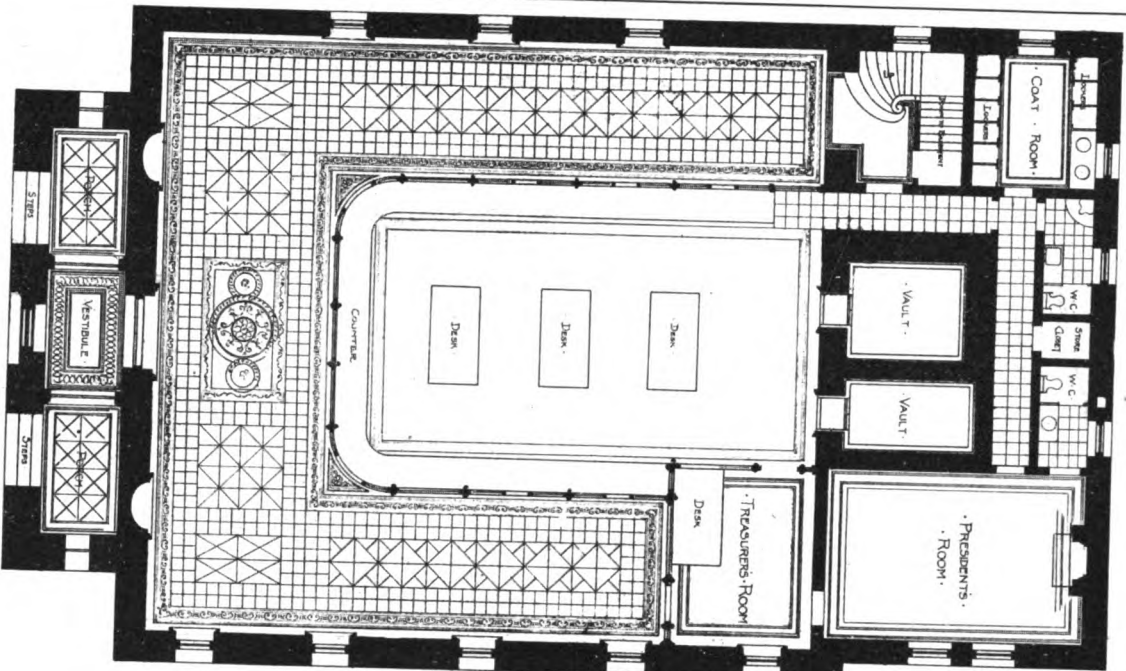
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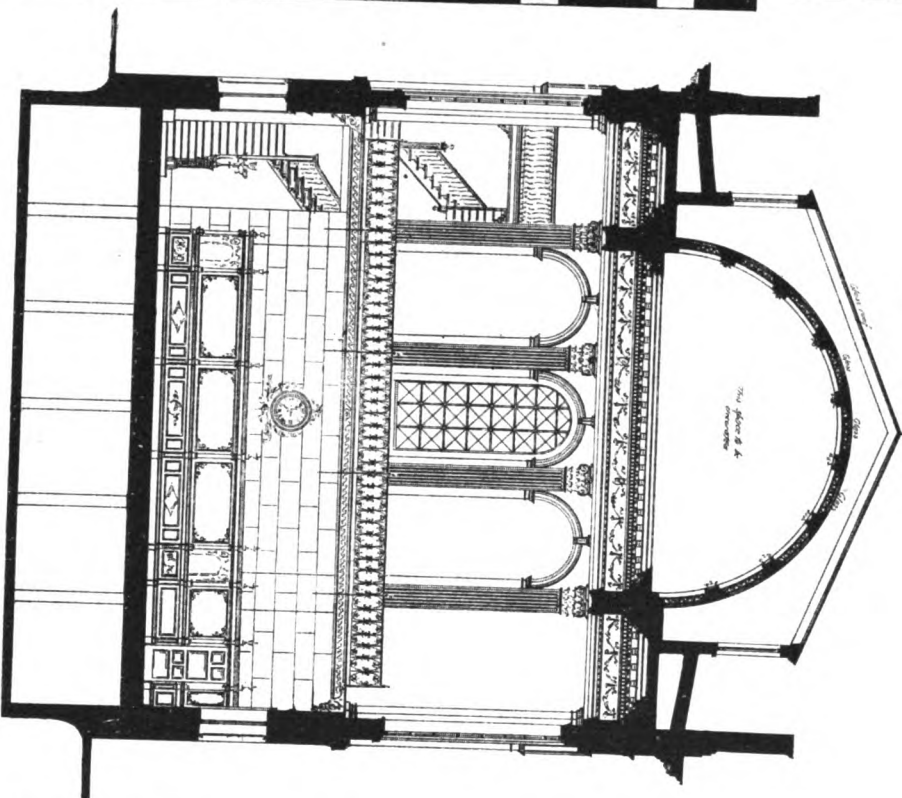




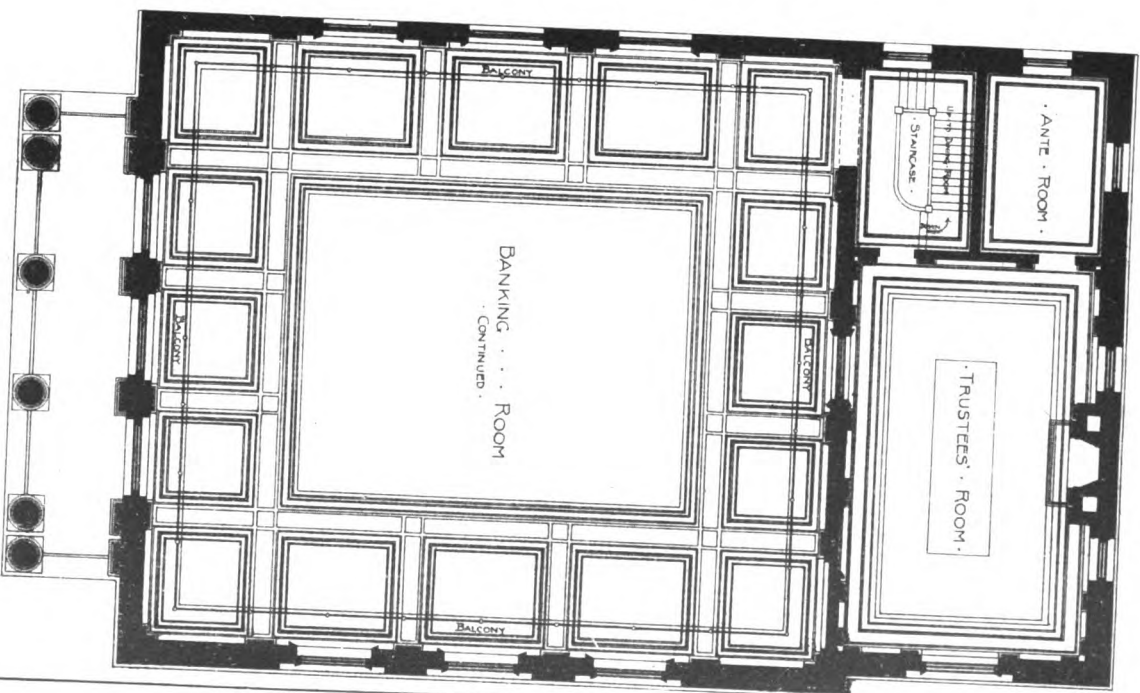




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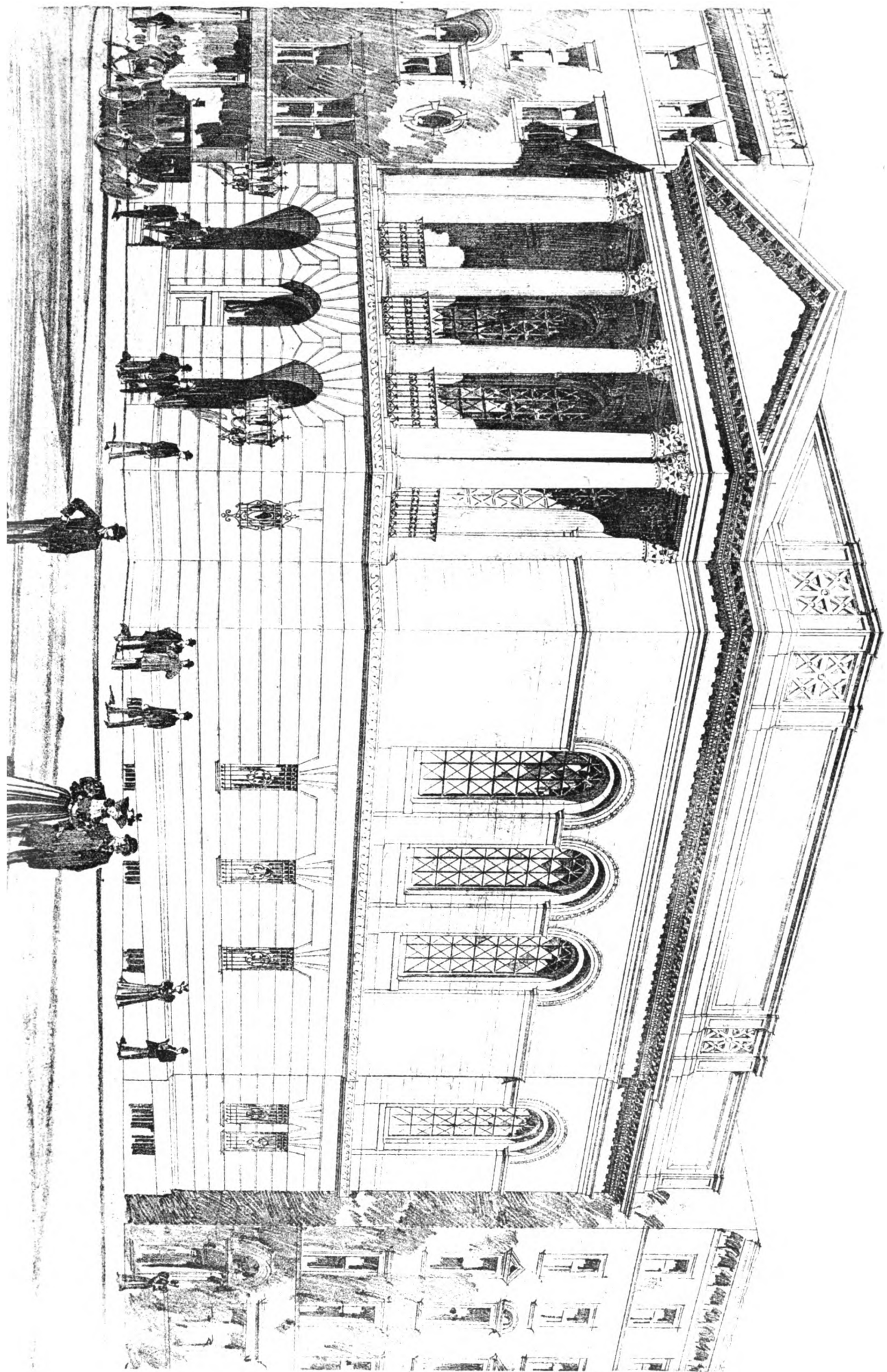
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principle of perspective, as it is a common practice to find the perspective of a point by means of the perspectives of two (or three) auxiliary lines drawn through the given point, but the value of the method consists essentially in the choice made of these auxiliary lines. Mr. Adhémar's method of coördinates, for instance, is also based upon the use of auxiliary lines parallel to three given directions perpendicular to each other, but these directions are always taken parallel or perpendicular to the plane of the picture; this does not mean that oblique auxiliary lines have never been used; Figure 8 shows how the perspective of a point is usually obtained when oblique auxiliary lines are used;  $O$  is the point-of-sight,  $P$  the plane of the picture,  $M$  the given point,  $MC$  and  $MD$  any two auxiliary lines drawn through  $M$ ;  $A$  and  $B$  their vanishing points (i. e., the intersections with the plane of the picture of the lines  $OA$  and  $OB$  respectively parallel to  $MC$  and  $MD$ ); the perspective of  $MC$ , for instance, is obtained by joining its vanishing point  $A$  to the point  $C$  where  $MC$  cuts the plane of the picture.

In trilinear perspective, any one of the auxiliary lines, such as  $MM_1$  (Fig. 1), is also put in perspective by means of its vanishing point  $A$ , but no attention is paid to the point where  $MM_1$  cuts the plane of the picture, as the perspective of the line  $MM_1$  is determined by the points  $A$  and  $a$ , the latter being the perspective of the point  $M_1$ , i. e., of the point of intersection of  $MM_1$  with the corresponding principal plane. The advantages resulting from the choice of point  $M_1$  to determine the perspective of  $MM_1$  are obvious: (1) The perspective of  $M_1$  is always on the corresponding line of reference; (2) The perspective of  $M_1$  being on the fixed line  $BC$ , is not altered by the rotation of the plane  $YOZ$  around  $BC$ , so that after the rotation has taken place, the point  $a$  is still the intersection of  $BC$  with the ray  $OM_1$  revolved; (3) The point  $M_1$  being the projection of point  $M$  on one of the principal planes is one of the data by means of which the point  $M$  is defined in the plans prepared by the architect, so that the ray  $OM_1$  can be traced directly on the corresponding plan or elevation.

It remains now for the draughtsmen to decide whether these theoretical advantages are also practical ones.

RENÉ DE SAUSSURE.

#### CHATEAU-HUNTING IN FRANCE.

WE had been very lucky in the houses we had taken in three successive summers, but this time we wanted something more serious than a residence for the sunny months. . . .

It was, however, a house which we could inhabit both summer and winter that we wanted now to hear of. The lease was up of our Paris home: to take a fresh one would probably mean spending the rest of our days in that pleasant city, most difficult to quit, and we wished to return to our native land as soon as my husband's work was finished. Our best plan seemed, therefore, to find a comfortable château, not too isolated, where a year's uninterrupted writing could be accomplished under circumstances wholesome and agreeable for the little members of our family. We had no illusions about French châteaux. We had stayed in a good many, not only in the neighborhood of Paris, where the greatest *luze* prevails, and in well-known regions like Burgundy and Brittany, where many of the owners of the big houses are Parisians, but also in remote departments like the Aveyron, the Aude, and the Landes, where country gentlemen, however high-sounding their names and titles, often live all the year round, excepting for a month or two in the winter, when they go for the season to Toulouse, Bordeaux, or some other provincial capital.

We therefore had a good general idea of what inhabited country-houses were like, and did not begin our search with any preconceived English ideas, except, perhaps, that derived from the fact that in England it is the practice to let to strangers, for moderate rents, houses appointed as luxuriously as when they are occupied by their owners. . . .

We returned to Paris from our pleasant excursion with a feeling that all-the-year-round places are difficult to find in France, when a few days later the noble owner of Azay-le-Rideau called to see me. He once had a highly distinguished tenant; but it was a distinction he did not wish to experience again, for Prince Frederick Charles and his companions-in-arms did not leave agreeable souvenirs in that marvel of the Renaissance which they occupied during the invasion in 1870.

The amiable *châtelain* of Azay warmly recommended us to install ourselves in Touraine, extolling the beauty of the country, and the pleasant life in that land of châteaux; and he told us how to get hold of the notaries in that region who were most likely to know of places to let.

The result of his directions was that the following week found us making a series of drives through the Balzac country. The first was to see a château of which we had heard in Paris. Its situation undoubtedly was beautiful, on a hill overlooking the parallel streams of the Cher and the Loire, with the Cathedral of Tours in the background of the landscape; but the interior arrangements gave the idea of a house stuffy in summer and chilly in the winter. We were rather surprised, as it was once rented by some friends of ours who have one of the finest hôtels in the quarter of the Champs Elysées, with air and space and light, which ought to be in greater abundance in the country than in the capital. How was it that people who insisted on every sumptuous luxury in Paris, should in Touraine

put up with a rather mean habitation with which they had no association? The mystery was solved when we afterwards heard that their eldest son had been sent to Tours to do his military service, for there is nothing that the most *mondaine* of Parisian mothers will not endure to be near their offspring.

The same day, we drove to a place we were solely tempted to take. Divided by a dense wood from a picturesque village, which had seen no change since "Le Lys dans la Vallée" lived hard by, stood a lodge-gate of architecture giving promise of advanced civilization within. We were not disappointed. A handsome modern house, not unworthy of the neighborhood of the historical châteaux of the Loire, was quite eclipsed by the magnificence of the stables, — stables such as I have rarely seen in France, and to have lived up to them would have certainly ruined us, had we taken Château Rénard. Its site was superb, with a view across the valley of the two rivers over against Luynes. It had been built by a rich Tourangean, and his widow had retired to a convent, leaving a beautiful chapel as a memorial of her share in planning the château. For a summer residence it was delightfully arranged, and the lilacs in flower, the blue sky and the singing of the birds made one feel that it would be good to rest here — till the turn of the leaf. But what of the winter, with Tours half a day's journey away, and the green woodland that lay between the park and the village a gloomy black forest? The interior, too, seemed better adapted for the playtime of the year than for long winter evenings, as the necessity for doors to *salons* seemed not to have occurred to the architect, and airy portières are a chilly protection against the howling *bise*.

Another day we explored the country round about Chinon, with its memories of Joan of Arc. We had the engraving of a château within a drive of the birthplace of Rabelais, and as we approached it on a perfect May afternoon, with the nightingales singing their hearts out, it seemed as if we had at last found an ideal habitation, so much better than the picture was the graceful mass of turrets, pinnacles and tracery that met our view as we crossed the rich meadows, past the *pigeonnier* below the house. We had quitted the carriage to take a short cut, and after we had done admiring the fifteenth-century architecture, we noticed that there was no entrance visible. Before we had time to think of any learned reason why a house of this period should be built without a front door, we had wandered round the entire building without perceiving any means of ingress except a dingy-looking portal, evidently the *entrée de service*. A careworn woman came forth from it and offered to show us the château. After passing by a diminutive kitchen, we entered a rude apartment, the furniture of which reminded me of the inventory of the goods of the Yonghey Bonghey Bô as sung by the favorite English poet of my sons, the late Mr. Edward Lear. We thought it was what in an English house would be the servant's hall, and its bareness showed the aversion French servants all have to take their meals outside the kitchen. "*La salle-à-manger des domestiques?*" my companion therefore blandly inquired. "*La salle-à-manger principale: la seule salle-à-manger,*" was the severe answer. It must in justice be said that the whole mansion was furnished in strict harmony with the dining-room; but the most comfortable inventions of ancient and modern art could never have made it habitable, as all its countless rooms were of the dimensions of cells or cupboards. The explanation, perhaps, was that it was built for the officers of the Court in the days when Agnès Sorel had a château on the road to Chinon, when Charles VII was in residence in the Plantaganet stronghold; and was therefore in those days simply a barrack, not used for entertaining, but erected at the happy epoch when everything that rose from the ground was beautiful in form. All the same, it was odd that its present owners should have taken so much pains to revive the deceptive façade.

If outlay of money could not have made habitable the picturesque quarters of the retinue of "La Dame de Beauté," that was not the case with the next château we visited. The people at Azay-le-Rideau had told us about it, and it is one of the finest Renaissance structures in Touraine, though Murray be ignorant of it, and Augustus Hare acknowledge it not. Even the painstaking Joanne makes but brief mention of this splendid old pile on the Indre. Four massive towers, crowned with extinguisher-tops, led us to expect something rather impressive inside; but the majestic proportions of the *salle des gardes*, and the remarkable state of preservation of the ceiling, emblazoned with arms and names, were beyond all anticipation. It should be observed that this magnificent apartment, as fine as anything at Chenonceaux, and almost as vast as the great modern hall at Ferrières, met our astonished gaze in what was practically a half-inhabited farmhouse. It seems that at the Revolution it was sold as *biens nationaux*; it had never passed into the hands of wealthy people or been inhabited since as a château, and was now the property of a village notary, whose *belle mère* occupied some of the rooms on the ground-floor, while the fine chambers on the second story were used as stores for the farm produce. There were one or two barely furnished bedrooms in the towers, with walls a couple of yards thick, and it was the practice of the owner to let them during the summer months, together with the *salle des gardes*, for a moderate sum to families of the *petite bourgeoisie*, who came to spend the holidays with half-a-dozen children and a *bonne-à-tout-faire*. It was singularly incongruous, the idea of these good people spending the nights sleeping five in a meanly furnished bedroom, and the days in a hall in which Diane de Poitiers might have banqueted. If we had been in search of a property to buy instead of to hire, it seemed to be a

rare chance of acquiring a fine place in a lovely country, which would have needed comparatively little expenditure to make it a splendid habitation. Perhaps the river, which surrounded it almost like a moat, turning a picturesque mill, made it damp in winter, though Azay-le-Rideau, in a similar situation, is often inhabited by the family until after the New Year.

A remarkable contrast was the next house we inspected. It was a nice place at the gates of Tours, surrounded by what the French call a *parc clos de murs*, and the English "extensive grounds," and it must have been a most agreeable residence before the era of railways. Unfortunately, the engineers who brought those destroyers of calm to Tours made an iron-bound island of this little estate; and the truthful notary who sent us there warned us that if we were constituted like him, our nerves would not survive the whistling a week. Moreover, the only approach to it from the town was through a grimy suburb, most unlike the capital of Touraine. It is, indeed, a city of contrasts. M. Ludovic Halévy has sometimes talked to me about his impressions there when it was the seat of Government during the war, some of which he has recorded in his delightful volume, "*L'Invasion*." He was struck with the marvellous change from the tumult of the centre of the town, where troops were hurrying through and politicians clamoring to see Gambetta, to the stillness of the streets around the Cathedral, which were as tranquil as when Balzac described them. Revolutions and wars only last for a season, but railways and their disfigurements never disappear; and to-day by the préfecture at Tours, if one turns in one direction, in three minutes one is in the pious and discreet quarter frequented by canons, while the other leads one as quickly to the smoke and noise of a manufacturing faubourg.

We had not yet explored the north side of the Loire, so one May morning we drove towards Langeais. Above a gateway in a high park wall hung a rusty chain, and this being pulled caused a bell to give forth a sepulchral sound. A surprised gardener, after a long delay, let the carriage in, which toiled up through a tangled thicket of vegetation till it stopped before a handsome *perron*. The rooms were of fine proportion, yet the sunlight streaming by the great windows, and the glorious prospect of river and valley, did not drive away a chilly feeling, which would have been more appropriate to a visit to a mausoleum on a November evening. Up-stairs there was a stately chamber with an old engraving on the wall representing the birth of the Duc de Bordeaux, and on *quérison* stood a faded photograph, signed "Philippe Comte de Paris." In one corner was a bale of the *Gazette de France*, and while we were wondering why for months the wrappers of that respected Royalist organ had not been broken, and why they had been brought to a bedroom, the gaunt wife of the gardener, pointing to the dust-laden baldachin, croaked, "*Le lit où Madame la Marquise est morte*." Then we recognized the prevailing odor of disinfectant, and we understood the rows of medicine bottles on the parquet, and the unopened newspapers and all the rest. We fled from that haunted château down to the Loire, rolling towards Saumur beneath a sky of blue.

In the opposite direction we were sent another day to a property hidden among greenlands. It had not an inhabited air, and the owner, who looked more like an Irish landlord than a French proprietor, told us that, being solitary, he lived in a farm, desiring to let his manor-house, a word which describes more aptly than *château* the spacious building of unpretentious English style — though every rural residence from a suburban villa to Chantilly is called a castle in France. We, moreover, noticed some English engravings, not of the kind collected in France — interiors of Windsor and views of York Minster — and it turned out that the mother of this lonely gentleman was the daughter of an Honorable and Reverend Prebendary of the Church of England, and first cousin to a noble lord who was a once famous Cabinet Minister. She died in giving birth to her son, and he had never spoken a word of English. What was worthy of remark was that while he was closely connected with the British Peerage, he had not even a *particule* to his French name, and that being the owner of a big house and a nice estate, he did not call himself Marquis or Vicomte. Perhaps it was unconscious English pride that caused this rare self-restraint, as not one French *hobereau* in a hundred, even when his origin is humblest, refrains from decking himself with a title, whether he has the shadow of a right to it or not.

This place, like all the others we had seen in Touraine, seemed not a desirable winter residence, and that objection applies not only to the few which are to let, but to most of the inhabited country-houses. It is due to the fact that most of the *châtelains* who do not go to Paris have hôtels for the coldest months in their provincial towns. The former owners of the property I have called Château Rénard always thus migrated to Tours, at the St. Martin, to their hôtel near the basilica dedicated to that saint. What M. Taine said of the "Ancien Régime" is true now, that only the English and the Germans are content to spend the sad months of rain in the solitude of a castle.

Time fails to recount all our other expeditions. On one, eastward from Paris in the direction of Champagne, a château we inspected had belonged to an ambassador now dead. It was a fine house, with a beautiful library worthy of its late owner; but the place was going to ruin from disuse, and even when in good repair it was said to be glacial in winter. We had heard that the present proprietor little resembled his refined and distinguished father, but we were not prepared for the apparition that greeted us. We were told that he

lived on a farm, the life of a peasant; but French peasants are generally small creatures in blue blouses, while this was a bearded and booted giant, like the traditional pictures of ranchmen or South African Boers, with an undiplomatic voice of thunder.

Another tour of inspection we took on the north coast, not with any conviction that we should settle in that region; but I was tired of travelling far from my little sons, and before the tourist season Le Treport is a charming place for babes, when the fisherpeople decorate their sails for the *Fête-Dieu*. Our most amusing incident in Normandy and Picardy was at a pretty place near Abbeville, where the owner had long wished for an English tenant, and to prove it showed us a printed catechism sent him by a London estate-agent, which he had answered with the aid of a well-known authoress. It was easy enough to reply to the questions about the trains and the drains, but when he was asked, "Is the country society in the neighborhood agreeable?" and "What are the nearest packs of hounds?" he felt some difficulty in describing the charms of the scattered and unsociable *petite noblesse de province*, and that a reference to the occasional *rallye-papier* of the officers at Amiens was scarcely adequate. The incident illustrates the difference of English and French ideas on country life.

But the summer was marching along, and we were as far from finding our château as when we commenced our hunting in early spring. Our friends continually said, "Why not settle in Seine-et-Marne or Seine-et-Oise? The country is lovely and swarming with nice people; and if you are bored you can always run up to Paris, while for studying provincial life there is no difference between one neighborhood and another, except for the *patois* of the peasants." The last observation is, unfortunately, almost true, as a village in Brie is organized in exactly the same way as a village in Dauphiné or Guienne, so after some disdainful protests about the *banlieue de Paris*, we began to explore that radius.

Our first attempt was not promising. A "Moderate" politician of our acquaintance covets the seat of a Socialist deputy, and owns a local newspaper to furnish his campaign. He kindly offered to announce in it our wants, with the result that a perfectly lyrical description was forwarded to us of a château near the Forest of Montmorency. We did not fancy that side of Paris, though the neighborhood of an illustrious lady — almost the last of the second generation of the *Mater Regum*, whose tomb I have seen at Ajaccio — would have been agreeable. But even the proximity of St. Gratien did not justify the rent asked, 18,000 francs — over £700. The odd thing was that though this indicated a place of great pretension, no one knew its name, and it was not marked on the map. However, it was so near Paris that the day of M. Bourget's reception at the Academy, after M. de Vogüé had finished his peroration, there was time to fly to the Gare du Nord, visit the property, and return for dinner. On the way we decided that, however attractive the place, we would not be tempted by its luxurious comfort — and we were not. It was a dusty roadside villa in a rather pretty garden, and the whole property, including the shabby furniture, was not worth three years' rent. We concluded that the owner was a lunatic.

A day or two later I was enjoying the marvellous view over the Place de la Concorde from the balcony of the most finely situated town-house in the world, where the Prince de Talleyrand died, and Baroness de X, who has a special kindness for her country-women, for she was born in England, said she had found what we wanted not far from her own famous château. The next afternoon a carriage met us at a station on the Strasburg line, and drove us to a perfectly charming place. A farmer-general of Louis XIV had built on a smaller scale what Fouquet reared at Vaux, and when in the next reign it was given to Madame de Pompadour, it was decorated within by the most famous artists of the period. It was then that Louis XV had a *chaussée* laid down of fifty kilometres for the favorite to drive thence with ease to Versailles, and sometimes in our drives we come to a "*carréfour Pompadour*" to recall the history of that paved road, though we did not become the successors of *La belle Marquise*. The owner, the grandson of a celebrated regicide of the Convention, showed us all the beauties of the house, and of the great park stretching down to the Marne; but he wanted to sell and not to let, and our specious plea that the season for sales had passed for the year was belied a fortnight later when some of our own friends bought the place.

It was only an hour's drive from that pleasant spot, in an even more picturesque corner of the Brie, that we finally found a resting-place. The kind *châtelaine*, who had told us of the former, asked the wittiest member of the Académie Française to call to see me and sing the praises of a place, also within reach of her own stately domain, which we had originally heard of from an agent in the days when we mistrusted agencies, and despised the environs of Paris, and thus we became his nearest neighbors. We had lighted upon an ideal French home. The château, standing high in a finely timbered park, possesses within and without all the qualities that a country home ought to have — beauty, spaciousness and comfort. It was built in the closing days of Louis XIII, and is a perfect specimen of the epoch. Madame de Sévigné saw its completion when, as Marie de Rabutin-Chantal, she came here from Bourhily and spent the last years of her girlhood in the village. More than a century later, a letter-writer of a very different school, Diderot, dated much of his correspondence with Mlle. Voland from the château in the valley below, and some of his most embarrassing anecdotes refer to the then occupants of this place. . . .

We are surrounded by all the contrast and contradiction of French life. The gaiety and movement of Paris reddens the northern sky at night with the glow of its lights; below these windows, within these walls, there are pathetic memories of invasion and defeat, one day to be revenged, as the roar of the cannon from the forts protecting the capital sometimes reminds us; and behind us are boundless forests, smiling villages, fertile hills and plains—all the peaceful quiet of rural France, where the never-ending toil of the peasants amid the tranquil beauty of the landscape makes one imagine that the glitter and turmoil of the fairest of cities is as distant as the scene of battle and devastation.—*Evelyn Frances Bodley, in Blackwood's Magazine.*

#### A PLEA FOR MODERATION.

THE author of the subjoined sonnet writes:

"I enclose a plea for moderation in architecture, which possibly you may find room for in your columns.  
"I have taken a liberty in ending my sonnet with an Alexandrine, which is, perhaps, to poetry what 'Gothic foliage on Renaissance columns' would be to architecture, but then, I am an architect and not a poet."

VITA BREVIS, ARS LONGA.

Long is the art of those, though few their hours,  
Through whom are fashioned temple, tower and tomb;  
For they, if Wisdom's lamp their work illumine  
Are instruments of the Creator's powers  
On forms of beauty, not like fragile flowers,  
But haply sharers in earth's final doom.  
Submissive are they and the sacred gloom  
Of vaulted nave grows as by sun and showers.  
No strange effects mar Nature's harmony,  
No glaring contrasts break her calm repose:  
There all is balanced with just symmetry.  
So is best art. Ionic<sup>1</sup> shapes disclose  
The tender figure of a fair young girl  
In subtle entasis and volute's mazy swirl.



#### BOSTON SOCIETY OF ARCHITECTS.

IN submitting this, my first annual report as Secretary of the Boston Society of Architects, I cannot but congratulate the members upon the important results accomplished during the past year and the bright outlook for increased usefulness in the immediate future. Never, I believe, in the history of the Society, has a more general and enthusiastic interest been manifested in its various undertakings, and never have its monthly meetings attracted a larger attendance.

The average number present at the meetings the past year has been twenty-seven, as compared with twenty the two previous years, a positive gain of one-third. The largest attendance at any meeting has been fifty; the smallest, fifteen.

Two Fellows have severed their connection with the Society during the year, one resigning at the request of the Executive Committee, and the other being dropped for non-payment of dues.

On the other hand, the membership has been increased by the admission of three Fellows, four Juniors, one Associate and one Honorary member, a total of nine.

At the monthly meetings, which have usually been held in the comfortable rooms of the Exchange Club, papers have been read upon the following subjects:

"The Barbarians in Italy," a study of Italian mediæval architecture, by Charles A. Cummings.

"The Steel Construction of Tremont Temple," (illustrated) by C. H. Blackall.

"Greek Ornament and Detail," (illustrated) by T. A. Fox.

"The Origin and Development of the Doric Style," by Edward Robinson.

"The Massachusetts State-House," by T. A. Fox.

"The Union of Building Trades Schools with Schools of Architectural Design," by R. D. Andrews.

There have also been discussions of

"The Relation of the Society to the American Institute of Architects."

"The New Architectural Department at Harvard."

"The Decorations in the Public Library."

Among the guests on these occasions have been Mr. S. A. B. Abbott, Mr. McKim, Mr. Herbert Putnam, Mr. Edward Robinson, Mr. Cass Gilbert, Mr. E. A. Abbey, Mr. John Sargent, Mr. Clement K. Fay, Mr. E. H. Kendall, Mr. Alfred Stone, President Eliot, Prof. N. S. Shaler, Prof. Charles Eliot Norton, Prof. Moore, Prof. I. N. Hollis and Rev. Philip S. Moxom.

Among the more serious enterprises which have engaged the attention of the Society during the year may be mentioned:

The adoption of the Code of Ethics.

The establishment of the Free Architectural Atelier.

The joint architectural exhibition of the Society and Architectural Club.

The formation of a Joint Committee on Building-Laws, acting in connection with the Associated Board of Trade.

The satisfactory settlement of the question as to the relation of the Society to the A. I. A.

The second successful effort to preserve the historic State-House.

In addition to these subjects, the Executive Committee has been called upon to consider an unusually large number of matters of special moment to the profession.

The firm attitude which the Society has of late taken for the maintenance of a high standard of professional practice and honorable dealings among our members has undoubtedly contributed, in no small measure, to the increased estimation in which the Society is held by the profession and the general public. Nothing shows this added interest better than the number of inquiries recently received regarding the requirements for admission. As to the work in which the Society may profitably engage in the future, two matters seem to demand immediate attention:

*First.*—To carry out the scheme for the embellishment of Copley Square. The preliminary steps in this important project have already been taken; a design has been prepared which meets very general acceptance, and such expressions of approval have been received from public-spirited citizens and men of financial ability that it would seem as if the execution of the plan might, with reasonable exertion on the part of its friends, be readily accomplished.

*Second.*—The enactment of a law restricting the height of buildings outside the present business section of the city. In the present stage of artistic advancement in the community, it would probably be impossible to secure the passage of such a bill as would give to the residential section of Boston the dignified regularity which is so pleasing in many European cities, but it certainly is possible, by well-directed efforts, to prevent the further disfigurement of our city by such abnormal structures as the one recently built upon one of our finest avenues. The architect of any such structure would doubtless regret as much as any one the fact that the present statutes permit the selfish interests of an owner not only to destroy the beauty of a neighborhood by such a building as may please his fancy, but to deface for years the contour of a city. While such things are permitted by law, it is not for us so much to criticize the architect as to take immediate steps to remove the temptation from the owner.

These two measures, one looking to the adornment of our city, and the other to the prevention of her disfigurement, are suggested as objects worthy of the best efforts of this Society. Both are important; both are practical, and who shall say they are not possible? Would it not be a worthy record of the year now opening before us to be able to report one year hence their accomplishment?

EDWIN J. LEWIS, JR., Secretary.

#### NEW YORK CHAPTER, A. I. A.

A REGULAR meeting was held in the Chapter Quarters, 156 Fifth Avenue, on January 8, 1896, at 3.30 P. M.

The minutes of the last meeting were read and accepted.

The Executive Committee presented a letter from the Municipal Art Society of New York in relation to a proposed memorial of R. M. Hunt, inviting the Chapter to assist in raising a fund for that purpose and to appoint a committee of three to confer with a committee of like number from other societies, with a view to the subsequent appointment of a joint committee composed of delegates from all the contributing societies to decide on the form of the memorial, and other details.

The Secretary was charged to assure the Society of the cordial cooperation of the Chapter, and the President to appoint a committee of three as desired. (The appointment has been made.)

Communications were presented from the Pennsylvania Academy of Fine Arts, the Southern California Chapter, A. I. A., the New York Building Material Exhibit, the Cleveland Architectural Club, the Architectural League of New York, and the publishers of *House and Home*.

Also a letter from the Secretary of the Institute, giving his reasons for extending to respectable manufacturers of building appliances such courtesies as giving them a list of Institute members when they ask for it. A member said he was inclined to agree with the Secretary of the Institute that discrimination should be made by the Institute and the Chapters in favor of the manufacturers of exceptional building appliances, but called attention to the fact that the Board of Directors, A. I. A., at its meeting of June 3, 1895, expressed its disapproval of "any form of approval or endorsement of persons, materials, or workmanship, in connection with inventions, devices or things, made to be used in the erection or equipment of buildings," also that this inhibition is in conformity with an old rule of order of the Chapter, which has never been abrogated.

After considerable discussion, the matter of giving lists of members, or extending other like courtesies to manufacturers or dealers was left to the discretion of the Secretary.

There was produced a reproduction of Mr. Barr Ferree's recent paper on the late Mr. R. M. Hunt, presented by the author to the Chapter.

<sup>1</sup> See Vitruvius.

The following resolution was unanimously adopted:

*Resolved*, That the thanks of this Chapter be tendered to Mr. Barr Ferree for one of the fifty fine copies of his illustrated article on "Richard Morris Hunt; his Art and Work," reprinted by him from the columns of *Architecture and Building* of December 7, 1895, for private distribution; an article which the Chapter recognizes as alike appreciative and judicious, and as possessing a literary quality which places it among the best contributions to the history of architectural practice in America.

A. J. BLOOR, *Secretary*.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

ENTRANCE TO THE JOHNSTON EMERGENCY HOSPITAL, MILWAUKEE, WIS. MESSRS. FERRY & CLAS, ARCHITECTS, MILWAUKEE, WIS.

[Heliochrome issued with the International and Imperial Editions only.]

COMPETITIVE DESIGN FOR THE NEW BEDFORD SAVINGS BANK BUILDING, NEW BEDFORD, MASS. MESSRS. PEABODY & STEARNS, ARCHITECTS, BOSTON, MASS.

[Issued with the International and Imperial Editions only.]

in and around Boston. The block consists of six houses of three apartments each, and is built in brick and half timber with foundations of Weymouth seam-faced granite from Gilbreth quarries. The suites are attractive and supplied with all modern conveniences; most of them are already rented. The Gables is the property of Mr. Edwin D. Bell, of Boston, and cost \$75,000.

CROSBY SCHOOL-HOUSE, ARLINGTON, MASS. MESSRS. GAY & PROCTOR, ARCHITECTS, BOSTON, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

DESIGN FOR A FINE ART BUILDING BY MR. HARRY HAKE, CINCINNATI, O.

SGRAFFITO FRIEZE, NO. 96, VIA BANCHI, VECCHI, ROME. SGRAFFITO FRIEZE, NO. 62, VIA BORGO, NUOVO, ROME.

A GROUP OF COMMEMORATIVE MONUMENTS.

A GROUP OF TOWERS.

[Additional Illustrations in the International Edition.]

THE JOHNSTON EMERGENCY HOSPITAL, MILWAUKEE, WIS. MESSRS. FERRY & CLAS, ARCHITECTS, MILWAUKEE, WIS.

[Gelatine Print.]



Trinity Almshouse, Mile-End Road, London, Eng: Sir Christopher Wren, Architect. From the Builder.

COMPETITIVE DESIGN FOR THE NEW BEDFORD SAVINGS BANK BUILDING, NEW BEDFORD, MASS. MESSRS. ANDREWS, JAMES & RANTOUL, ARCHITECTS, BOSTON, MASS.

[Issued with the International and Imperial Editions only.]

ACCEPTED DESIGN FOR THE NEW BEDFORD SAVINGS BANK BUILDING, NEW BEDFORD, MASS. MR. CHARLES BRIGHAM, ARCHITECT, BOSTON, MASS.

In a small limited competition of three, this design was selected for execution.

WHOLESALE WAREHOUSE FOR MESSRS. LINDSAY BROS., MINNEAPOLIS, MINN. MR. H. W. JONES, ARCHITECT, MINNEAPOLIS, MINN.

"THE LANESBOROUGH GABLES": ROXBURY, MASS. MESSRS. CHARLES E. PARK AND RALPH E. SAWYER, ASSOCIATED ARCHITECTS, BOSTON, MASS.

The accompanying illustration shows a building nearly completed at the corner of Humboldt and Walnut Avenues. This is a pleasant departure from the stereotyped form of apartment-houses

WEST FRONT OF THE COLLEGIATE CHURCH OF ST. HILDEBERT, GOURNAY, FRANCE.

The church of St. Hildebert<sup>1</sup> was, previously to the Revolution, both parochial and collegiate. Its foundation is supposed to be of very high antiquity. There is, however, no proof of the precise period of the establishment of the chapter here. The earliest records upon the subject bear date in the year 1180, and merely mention it as being then in existence, but according to tradition it was first fixed at the neighboring village of Brefmoutier, and was removed to Gournay by Hugh, the last of the Norman counts. The same Hugh is generally reported to have commenced the erection of

<sup>1</sup> St. Hildebert is a name of rare occurrence in hagiology. He was Bishop of Meaux in the seventh century, but was not honored with a place in the calendar till about three hundred years after his decease, at which time his relics were carried to different parts of France, and finally interred at Gournay. The church on this occasion changed its patron, an event which commonly happened in those ages, and placed itself under the protection of the new saint instead of the proto-martyr to whom it had been originally dedicated. Peter de Natalibus, in his *Catalogus Sanctorum*, says that St. Hildebert ended his life as Archbishop of Tours, and that he died in that city and was there buried, "*ibique jacens in miraculis vivit*." He speaks of him likewise as an elegant scholar, and the author of a work "*De contemptu hujus Vitæ*," written partly in verse and partly in prose.



the present church, but it is sufficiently known with how little accuracy the early historians are wont to express themselves on these subjects. The term, to "rebuild," often means no more than to repair, so that it is in many cases more safe to judge from the style of a building itself than from the records preserved to us respecting it. The architecture of the church at St. Hildebert would lead to the supposition that a considerable portion of it was standing in its present state at least 100 years anterior to the time of Hugh, and even admitting such to have been the case, there is still sufficient discrepancy in the rest of the edifice to account for the well-attested circumstance that, at the close of the thirteenth century, the church yet remained incomplete. The imperfect state of the building did not prevent its receiving the honor of a dedication; this ceremony was performed in one of the last years of the twelfth century, by Walter, Archbishop of Rouen, in person, attended, as commonly happened, by a great concourse of the nobles and clergy of the province; and in the first year of the following century, Herbert, Archbishop of Canterbury, passed over from England for the express purpose of doing honor by his presence to the translation of the relics of St. Hildebert. The banishment of Hugh de Gournay and confiscation of his property, which took place shortly after these events, deprived the canons of their liberal and powerful benefactor. Poverty caused the progress of the building to be suspended, and it was only by the aid of repeated indulgences, granted by the popes and archbishops, that it was finally brought to a state of completion. The two western towers are of a considerably more recent period; they were erected in their present state, of wood roofed with slate, in the middle of the seventeenth century. The timber was supplied by the Duchess of Longueville, whose husband was at that time Count of Gournay, and the rest of the charge was defrayed by the sale of the materials of a ruined chapel, dedicated to St. Julian, and of a small central tower, the only one originally attached to the building.

The church is in the form of a cross, consisting of a nave with aisles, choir and transepts. The west front is in the earliest style of Pointed architecture, and evidently of the period of the same Hugh de Gournay by whom the whole edifice is said to be raised. If compared with the same portion of the churches known to have been erected at a similar period in England, the closest resemblance will be traced between them. That of Salisbury Cathedral, the most noble instance of the kind in Britain, is later, and infinitely more richly ornamented. But in this at Gournay, the windows are the only portion that have altogether escaped mutilation or alteration. The side portals were evidently, in their original state, fronted with porches, which have now disappeared. Such has likewise been the case with the arches of entrance, and mention has already been made of the posterior date of the tower.

INTERIOR OF THE EQUITABLE INSURANCE OFFICE, MANCHESTER, ENG. MESSRS. W. WADDINGTON & SON, ARCHITECTS.

ENTRANCE TO BISHOPSGATE INSTITUTE, LONDON, ENG. MR. C. H. TOWNSEND, ARCHITECT.



BOSTON, MASS.—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt*: at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895*: at the Jordan Art Gallery, 460 Washington St.

*Pictures by Ross Turner*: at Doll & Richards's Gallery, 2 Park St., January 17 to 29.

*Fifty-third Exhibition, Oil-paintings and Sculpture*: at the Boston Art Club, January 13 to February 15.

*Paintings and Water-colors by Edward C. Cabot*: at Chase's Gallery, 346 Boylston St., January 14 to 25.

BRIDGEPORT, CONN.—*Second Annual Exhibition of Pictures*: at the Public Library, January 25 to March 15.

CHICAGO, ILL.—*Paintings by August Franzen*: January 17 to 31, *Works by Gustave Doré*: January 21 to March 22, at the Art Institute.

CINCINNATI, O.—*Paintings of the "Glasgow School"*: at the Art Museum, January 5 to February 2.

NEWTON, MASS.—*Exhibition of Pictures*: at the Newton Club, January 22 to 30.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures*: at the Metropolitan Museum of Art.

*Exhibition of Japanese Paintings and Color Prints*: at the Fine-Arts Building, 215 West 57th St., until February 5.

*Derbyshire Pictures by Robert W. Van Boskerck*: at Knoedler's Gallery, 34th St. and Fifth Ave., January 18 to February 14.

PHILADELPHIA, PA.—*Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts*: opens December 23, closes February 22. The Architectural Section of the Exhibition closes February 1.

PROVIDENCE, R. I.—*Exhibition of Oil-paintings*: at the Art Club, opens January 29.

SPRINGFIELD, MASS.—*Nineteenth Annual Exhibition of Paintings*: at James D. Gill's Gallery, opens January 31.



THE SWISS NATIONAL EXHIBITION.—At the National Exhibition which Geneva is preparing for its visitors, Swiss art in its most attractive and popular form will be effectively represented. The idea of the "Swiss Village," which is to form one of the principal open-air attractions of the Exposition, is analogous to that which inspired "Old London" at recent exhibitions at South Kensington. The chief difference will be that while there was a certain unity of purpose and arrangement in the buildings of "Old London," the "Swiss Village" will display the peculiarities and special tastes of the inhabitants of different Cantons in succeeding centuries. The house of Chalamala, the jester to the Counts of Gruyere, which claims to date from the fifteenth century, will probably be the oldest building reproduced; but the so-called "Rittershaus," at Schaffhausen, with its dazzling frescos, can claim almost as great antiquity. The arcades which still embellish the streets of Berne and Thun, and the less-visited town of Morat will furnish models of the types of such houses in the western Cantons; but the Canton of Ticino is more richly provided with such primitive shelters against the weather. From Meiringen has been brought the model of a two-storied house—one of the few which escaped the disastrous fire—which will show to what extent the Swiss sculptors of that district pushed the application of wood-carving to house-building; and, as a sort of contrast, two houses copied from originals at Werdenberg will show the more simple but ingenious taste of the inhabitants of St. Gall. The pine-covered slopes which surrounded the Lake of Geneva still boast many old fortified châteaux and farmhouses, bearing witness to the struggles between the Swiss and the House of Savoy of which both sides of the lake were the scene. Reproductions of these will be mingled with the more rustic dwellings of the central Cantons, where woodwork took the place of stone and brick; and the student of history will be able to trace with something approaching local and chronological accuracy the progress of security throughout the various Cantons. To those travellers who are not old enough to recollect the days when each Canton had its special costume, and the men and women were proud to wear it, the "Swiss Village" at the Geneva Exposition will be a source of interest and delight.—*Philadelphia Telegraph*.

GENEVA'S GREAT FOUNTAIN.—The fountain that the municipality of Geneva has established at the entrance of the port is the largest in the world, since it is three hundred feet in height. Geneva possesses a most complete distribution of water under pressure, the motive power for which is obtained from an artificial fall established upon the Rhone. The water for domestic purposes and for the running of certain motors is raised to a height of 215 feet above the level of the lake. For the distribution of motive force it is raised to a height of 460 feet. The reservoir is an open-air one, and is situated upon the top of Beasings, at a distance of three miles from the turbine building. An ingenious regulator, invented by Mr. Turrettini, assures the uniformity of pressure in the piping. The length of the first pipe line is about forty miles, and that of the second about sixty. It is with this latter that the fountain conduit is connected. The latter is set in play on Sundays, and sometimes on week days, in the evening. Instead of a single jet of great height, several are utilized that do not rise so high. Powerful electric-light projectors, placed in a structure near by, brightly illuminate them with varied colors.—*Boston Transcript*.

DEADENING THE NOISE ON BRIDGES.—A means for preventing the noise made by trains in passing over iron bridges has been devised by a German engineer named Boedecker. He puts a decking of 1½-inch planks between the cross girders, resting on three-inch timbers laid on the bottom flanges. On the planks a double layer of felt is laid, which is fixed to the vertical web of the cross girder. At the connections with the girder a timber cover-joint is placed on felt, and two hooked bolts connect the whole firmly to the bottom flange. Four inches of slag gravel cover the decking, which is inclined toward the centre of the bridge for drainage purposes. A layer of felt is laid between the planks and the timbers they rest upon, and the ironwork in contact with decking and ballast is asphalted. The decking weighs six hundred pounds per yard for a bridge eleven feet wide, and costs twenty-three cents a square foot. It is water-tight, and has proved very satisfactory in preventing noise.—*Boston Transcript*.

THE WARSAW HYGIENIC EXPOSITION.—United States Consul Rawicz, of Warsaw, Poland, reports that a second hygienic exposition similar to the first, held in 1887, will be held at that place from May 15 to July 15, 1896. The following list of the nine committees now at work and who report that much interest is being shown by the public will give an idea of the scope of the exposition. (1) Physico-chemical, (2) parasitic, (3) architectural, (4) pedagogical, (5) on hygiene of industry, (6) on hospitals, (7) pharmaceutical, (8) statistical, and (9) public hygiene. Each of the above committees is composed of, at least, three members selected from among the doctors of medicine, professors, engineers and other specialists, all under the presidency of the general committee.—*Philadelphia Record*.

**A CROWDED SPOT ON THE ISLAND OF MALTA.**—The most crowded spot on the earth's surface is that portion of the City of Valetta, Island of Malta, known as the "Manderaggio." In the whole of Valetta, the proportion is 75,000 human beings to the square mile, but in the Manderaggio there is one locality in which there are 2,574 persons living on a plot of ground less than two acres and a half in extent. This would give no fewer than 838,000 persons to the square mile, or 1,017.6 to the acre. In Liverpool, the most crowded city in Britain, the most densely populated portions have only 116.4 to the acre. — *Edinburgh Scotsman*.

**THE CROSSES ON MOSCOW'S CHURCH.**—Considerable interest has been aroused at Moscow by the ceremony of re-erecting the huge crosses surmounting the cupolas of the Church of the Ascension, where the czars are crowned, in the Kremlin. The crosses are of copper, thickly overlaid with gold, and the largest one, on the central dome, contains inside the copper cross a very ancient wooden one, supposed to have existed long before the foundation of the church. The entire fabric is being renovated and restored, in view of the ceremonial to take place there next spring. In all, a surface of over six hundred square yards, there being five cupolas, has been covered with gold-leaf, the total weight of which is about sixteen pounds. — *London Standard*.

**TREE-TRUNKS AS FILTERS.**—A well-known Austrian engineer, M. Pfister, is stated to have discovered a remarkable property of the trunks of trees, namely, that of retaining the salt of sea-water that has filtered through the trunk in the direction of the fibres. He has consequently constructed an apparatus designed to utilize this property in obtaining potable water for the use of ships' crews. This apparatus consists of a pump, which sucks up the sea-water into a reservoir and then forces it into the filter formed by the tree-trunk. As soon as the pressure reaches 1.5 to 2.5 atmospheres the water is seen—at the end of from one to three minutes, according to the kind of wood used—to make its exit from the other extremity of the trunk, at first in drops and then in fine streams, the water thus filtered being potable, freed, in fact, from every particle of the usual saline taste which is such a drawback to water obtained in the ordinary manner. — *Railway Review*.

**THE CURSED TOWER OF THE RHONE.**—The Cursed Tower is an architectural curiosity. It is almost as far out from the perpendicular as is the tower at Pisa, and is far more impressive, because it stands upon an isolated crag which drops below it sheer to the river in a vast precipice. Anciently, before it went wrong and its curse came upon it, the tower was the keep of the Benedictine nunnery of Soyons. Most ungalantly, in the year 1569, the Huguenots captured the abbey by assault; and thereupon the abbess, Louise d'Amanze (poor frightened soul!), hurriedly embraced the Reformed religion, in dread lest, without this concession to the rather decided opinions of the conquerors, still worse might come. Several of her nuns followed her hastily heterodox example; but the mass of them stood stoutly by their faith, and ended by making off with it intact to Valence. — *Thomas A. Janvier, in the January Century*.

**FLATS OR APARTMENTS, WHICH?**—"One thing I would like to know," said a New York citizen who has been out hunting a home, "is what constitutes a flat and what apartments. In general I know that apartments cost fifteen per cent more than flats; but I'd like to know where the difference lies. There's nothing in a name. One might suppose that 'Beverwyck' and 'Vallandigham' would indicate apartments; but there are flats renting for \$25 a month that bear those high-sounding titles; while the 'Rustler' is an apartment-house. Locality certainly doesn't tell, for I've seen apartments advertised on Essex Street and a 'flat to rent' on a choice block in Fifth Avenue. I used to think that anything with elevators and hardwood floors were apartments, and domiciles under \$50 a month flats; but experience has shaken that notion out of me. One other question of a similar nature used to bother me—the difference between a tenement and a flat—but a friend settled that. 'A tenement,' he told me 'is a flat with front fire-escapes on which the tenants hang their bedclothes.' I'd like to find an equally easy definition of an apartment." — *Philadelphia Telegraph*.

**MOVING A RUSSIAN TOWN ON SLEIGHS.**—The moving of an entire city to another point, which offers strategic and commercial advantages superior to its present location, is being proposed in the far north of Russia. The City of Kola, on the peninsula of the same name, is now situated at the confluence of two rivers, the Luttojoki and the Notozero, forming the Kola River, about fifty miles from the Arctic Ocean. While the rivers and the bay below are navigable for even large vessels, Kola is situated so far inland that it is shut off from the sea by ice much longer than other seaports situated even farther north, like Vardoe, in Norwegian Lapland. The Governor of the province Archangelsk, Baron Engelhardt, to whose jurisdiction the district of Kola belongs, has proposed to transfer the city to a better port nearer the mouth of Kola River into the Arctic Ocean. Imperial and ministerial consent having been given, active preparations are now being made to transport Kola, house by house, by sleighs on the river, to a spot forty-three miles below. The new location affords great advantages to navigation, and since it is surrounded by hills which it will take but little expense to strongly fortify, it will certainly become a point of great strategic importance. — *Philadelphia Record*.

**A MAMMOTH GLOBE.**—"Large maps" may be exceedingly desirable for certain purposes, but in the opinion of M. Elisé Reclus the need for large globes is even more clamant. In a Belgian review, that geographer submits a plan for the construction of a terrestrial globe on the scale of 1-100,000th. The diameter of this microcosm would be 127 metres, about 400 feet. The best of maps, says M. Reclus, are

deceptive. They do not accurately represent the relative dimensions of different regions. The globe, on the other hand, shows the actual structure of the planet. It gives each country its exact proportions, and renders accurate comparisons possible. On the suggested scale, moreover, a true idea of the height of mountains and the depth of oceans would be readily gained. Thus, the height even of Montmartre would be quite perceptible. The surface of the globe would be of plaster, the sea-level being represented by a thin sheet of glass. The structure would be made to turn upon its axis by means of steam or electricity. It would be preserved from the weather by an outer structure of glass and iron 160 metres in diameter. As the globe is intended for geographical study, a system of lifts and spiral platforms would be erected between the outer and the inner sphere, thus facilitating this object, while leaving the globe quite free to revolve. M. Reclus, in submitting his project, asks for the criticism as well as the help of geographers throughout the world. — *Westminster Gazette*.

**THE PROGRESS OF CREMATION.**—The practice of cremation is increasing in France, but increasing very slowly so far as the general public is concerned. According to some recent statistics, published by the Paris Prefect of Police, the number of cremations of private citizens at the Père-Lachaise Cemetery from August, 1889, to the end of April, 1895, was as follows: 1889, 49; 1890, 121; 1891, 184; 1892, 159; 1893, 189; 1894, 216, and 1895 (four months), 75. The furnace would often be idle were it not for the remains from the hospitals, which amount to from 2,000 to 2,500 bodies per annum. The apparatus employed is that of MM. Toisoul and Fradet, and works by means of gas with a recuperator. Incinerations are accomplished in an hour, or at most, an hour and a quarter, and the cost of the combustible never exceeds three francs per operation. Another apparatus, invented by M. Fichet, has been employed of late. Like the first, it consists of a gazogene furnishing oxide of carbon, and a recuperator supplying hot air to the vaulted chamber in which the reduction to ashes takes place. The difference between the two appliances lies chiefly in the application of the oxide, which is used solely for heating the recuperator, the combustion of the body being effected by hot air alone, thanks to the augmented efficiency thus obtained. According to this method, incineration takes place a little more rapidly than in the Toisoul furnace, but the expense is greater by nearly a quarter, eighteen hectolitres of coke being required instead of fourteen. — *N. Y. Evening Post*.

**NEW INDIAN FOR THE MASSACHUSETTS' COAT-OF-ARMS.**—F. W. Putnam, Peabody Professor of American Archaeology and Ethnology at Harvard University, has presented to Secretary of State Olin a description of an Indian which he thinks should take the place of the present one on the Massachusetts coat-of-arms. The present Indian is agreed by all who know anything about it to be but a poor representative of the type which was here in Massachusetts in the days of the early settlers, and Secretary Olin has for a long time been anxious to remedy this defect. In his report Professor Putnam gives a description of the accoutrements and wearing apparel of the figure, and gives his authority for the use of each article, and also for their positions on the figure. He places the bow in the left hand, and says that to place it in the right hand is as absurd as to represent a military officer with his sword hung on the right side. He says it is evident that the man who made the original drawing of the Indian knew nothing about Indians. He probably had never seen one, and had made the drawing from his own ideas. The ridiculous blunders which he made have since been perpetuated, and even incorporated into the State law. The design of Professor Putnam will be submitted to the Archives Committee. Other designs will also be examined. — *Boston Transcript*.

**NO MORE SIGNS ON INDEPENDENCE HALL.**—On receipt of a copy of the resolutions recently adopted by Councils forbidding the maintenance of any signs on the Chestnut Street front of Independence Hall, Chief Eisenhauer, of the Bureau of City Property, issued orders to Superintendent Rice that all signs must be down within three days. The Colonial Dames will lose a big brass sign, and among the other organizations that will suffer are the Grand Army and the Universal Peace Society. The two latter societies use the same entrance, and an argument between the two as to whether peace or war should predominate in outside emblems led to the passage of the resolution through Councils. — *Philadelphia Record*.

**THE RED-OAK OF WISCONSIN.**—The Wisconsin red-oak has for several years taken high rank in furniture and finishing factories on account of its softness, adaptability to shop work, its lively color and figure. When plain sawed it commands higher prices than any oak, although quarter-sawed white-oak is more expensive. According to *The Northwestern Lumberman*, this red-oak belt in Wisconsin is not wide, and at the rate the timber is being cut off it probably will not last more than six or seven years. In the northwestern part of the State, which is not yet opened up by railroads, there is a heavily timbered area which may contain much red-oak, but it will soon be traversed by a railway from Duluth. — *Garden and Forest*.

**QUEER STORY ABOUT A CHURCH.**—In connection with the Church of St. Raphael, where the recent marriage between Hélène de France and the Duke of Aosta took place, there is a story not generally known. It was built with the moneys of a converted Jew named Raphael. Just after the building was completed, Raphael had a dream that he would die within a week after the consecration of the place of worship. As a matter of course, he endeavored to delay the consecration by fair and unfair means, until a priest, with the help of a licensed victualler from the neighborhood, who procured a bottle of absolutely pure wine, consecrated the edifice. Then he told Raphael, who took to his bed and died three days afterward. — *Saturday Review*.

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**SUMMARY:—**

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IT is proposed in Massachusetts to restrict the height of apartment-houses to eighty feet, in place of the one hundred and twenty-five feet to which the law now limits the height of all buildings. Various opinions are expressed among architects, builders and real-estate men in regard to the proposition, but so far as we know, no one has publicly mentioned the principal reason for imposing such a restriction, which is, the necessity for preventing, so far as is reasonably possible, the spread of infectious diseases amongst the occupants of such houses. That an office-building, on costly land, may be built ten stories high, seems to be an accepted principle, and this is not an unreasonable limit; but contagious diseases do not occur in office-buildings; they are vacated and aired during sixteen hours out of every twenty-four, and they are usually of solid, non-absorbent materials, scantily furnished, and well cared for. With apartment-houses the case is entirely different. The rooms are constantly occupied; they are filled, usually to near suffocation, with furniture ready to be saturated with disease-germs; they are, comparatively, poorly built, with innumerable crevices, to put the air of the different rooms in communication; and they have, as a rule, no ventilation worthy of the name. Commonly, the perfume from the cigar of the lodger in the sixth story, passing up through the pipe-sleeves in the floors, mingles with that of the cigarette of the occupant of the seventh story, while both together ascend freely to the eighth; and so on, the upper stories accumulating a combination of nearly all the different flavors of the house. Where the aroma of tobacco and coffee can pass, the infection of diphtheria and scarlet-fever can pass also, and, in an apartment-house, the floors give very little effective separation. For this reason, more than all others, it is certainly desirable to limit the height of such houses. Where the limit should be set, it is not so easy to say, and the testimony of physicians would be useful in determining the restriction judiciously.

MR. JOHN A. WILSON, of Philadelphia, an engineer known to many architects, died in that city last week, at the age of fifty-nine. Mr. Wilson, when only twenty years old, was a member of the party which surveyed the

route for the Honduras Inter-oceanic Railway, serving as topographical engineer of the party. After his return from Central America, he entered the service of the Pennsylvania Railroad, and became chief engineer of the road. In 1875, he was appointed consulting engineer on the construction of the buildings for the Centennial Exposition. Later, he became a member of the well-known firm of architect-engineers, to which has been entrusted so much important work in Philadelphia and New York. In Philadelphia the firm carried out, among many other buildings, the two fine railway stations, the Broad-Street Station and the Reading Terminal. In the designing of the latter, Mr. Francis H. Kimball, of New York, was associated with the firm, and, in fact, the Wilsons, as they were familiarly known among the architects of New York and Philadelphia, often availed themselves of such assistance, and were highly esteemed in the profession.

MR. GEORGE W. POPE, who has been for many years very well known in and about Boston, as a builder, and, in connection with his son, as the architect of a large number of business and other buildings, died last week at his home in Boston. Mr. Pope was born in Kennebunkport, Maine, seventy-four years ago. He came to Boston while a boy, but only took up the profession of building later in life, when he had acquired capital enough for considerable undertakings. The first important building for which he contracted was the Boston Museum. Not long afterwards, with a partner, he built the Revere House, and in the years immediately following the great fire he erected some fifty buildings. His skill and judgment in matters of real estate and building, with his high sense of integrity, and his willingness to help in any useful work, made him much sought after as an officer of charitable and public corporation. For thirteen years he was President of the Board of Trustees of the City Hospital; and at the time of his death he was President of the Penny Savings Bank, Vice-President of the Workingmen's Building Association, and an officer of several coöperative and charitable institutions devoted to the improvement of the condition of workingmen. He served three years in the City Government, and acted for many years as one of the official appraisers, being regarded as one of the best judges of real estate in the city. Almost to the last, he was actively engaged in business, a considerable class of people in Boston thinking that their building-interests could not safely be committed to any one but Mr. Pope. Personally, Mr. Pope was a man well fitted to gain and keep friends. There was about him a certain atmosphere of kindness and sincerity which inspired confidence and regard, at the same time that he won respect by his clear common-sense and good judgment. In the varied relations which he held to other people he had become almost indispensable, and there is hardly a man in Boston who will be more missed, or whose place it will be more difficult to fill.

THE conduct, or rather the value, of the Supervising Architect's office has come before Congress in a new way. The members of the House of Representatives from Chicago are naturally interested in the subject of the intended Government building for that city, and, after some years of delay, have been recently unpleasantly surprised to be informed that the Supervising Architect has not office assistance enough to prepare plans for it, and that an appropriation must be made for the employment of outside assistance before the preparation of the plan would be entered upon. As the same state of things exists with regard to the plans for several other important public buildings, a joint resolution was, a few days ago, adopted by both Houses, appropriating fifty-five thousand dollars for employing such outside assistance; but, in the course of the debate, several members expressed their intention of looking into the needs of the Supervising Architect's office; and it is to be hoped that they will carry out their purpose.

THE friends of the late John Stewardson, of Philadelphia, are trying to establish a permanent memorial of his unselfish efforts for the advancement of architectural art, by the establishment of a fund, the income of which shall be devoted

to the maintenance of a scholarship fund for Pennsylvania students of architecture, in the same way that the McKim and Schermerhorn scholarships in New York, and the Rotch scholarship in Massachusetts, are maintained. For three or four years past, a travelling-scholar has been sent, by special subscription, to represent Pennsylvania architectural students abroad; and the natural course of things would be to make this travelling studentship secure, by an endowment, and thus add greatly to its value in promoting, by emulation, the improvement of those who are to be the Pennsylvania architects of the future. The present occasion affords an opportunity for connecting with such an endowment the name of a man who, in his short life, did very much to advance the artistic reputation of Philadelphia and the State, and who had nothing more at heart than the proper training of the younger members of the profession; and there seems to be no doubt that the effort will be successful.

**L**AWYERS do not, as a rule, exhibit themselves at their best in conducting building cases. No doubt they would say that architects are not very successful in solving legal problems; but architects do not, even in legal questions, throw common-sense to the winds as lawyers sometimes do when they wish to make an impression on the jury. "What wall-weight will a granite templet carry without breaking?" an Assistant District Attorney asked an engineer-witness the other day in a New York court. The unfortunate expert pondered over the question for some time, trying to make out whether it had any rational meaning whatever, and concluded, apparently, that it was intended for some sort of joke at his expense. "It's ridiculous to ask—" he began to reply, when the Assistant District Attorney interrupted him with a roar, "Don't you call my questions ridiculous," he shouted; and the expert fell into the condition of abashed silence which it was probably the intention of the eminent counsel to produce, in order that he might show a dangerous witness in this humiliated state to the jury. It is hardly necessary to say that an ordinary jury, hearing in a muddled way a conversation going on about things that they do not comprehend, and waking up to see the man who appeared to know something of the subject, and who held views unfavorable to the theory of the sharpest counsel, sitting confused and silent before the triumphant smile of the latter, conclude that, after all, the expert did not understand the case as well as the lawyer, or had been detected by the latter in some misstatement, and that it would be best to disregard his testimony; and this is, of course, just what the eminent counsel wants. Judges, it is fair to say, are not deceived by these tricks, and often try to reassure a timid witness; but, unfortunately, it is the jury, not the judge, that decides upon matters of fact, and many lawyers will exert all their powers to discredit the testimony of an expert by creating prejudice against him. This certainly should not be so. Undoubtedly, the best way, and the way which is likely some time to prevail, is to have expert evidence taken by the Court, for its own benefit, without allowing the parties to interfere; but, in the meantime, it may be of some use to remind architects, engineers and builders who are called upon to give expert testimony in court that, as their evidence is generally by far the most important factor in the case, they not only may, but should, keep their heads cool and clear, not allowing themselves to be disturbed by the opposing counsel's endeavors to disturb their equanimity. One of his devices for doing so is likely to be the asking of some foolish question, like that about the granite templet, followed by an explosion of wrath when the question is incautiously answered as it deserves; and another generally consists in asking the witness whether he does not understand that he is to be paid for his testimony. The obvious intention of the latter question is to make it appear to the jury, from the witness's own admission, that he has been bribed to distort facts in the interest of the person paying him; and witnesses, seeing this intention, and, naturally, desiring to avoid giving the jury such an impression, often admit reluctantly the fact of having been promised payment. This hesitation, however, gives the astute lawyer just the opportunity that he desires. It is easy for him, by a few pointed questions, to elicit the fact that payment has been made, or promised, and he can then exhibit the witness to the jury, not only as having been bribed to give his testimony, but as having attempted to prevaricate about the matter, and as being,

in consequence, an untruthful person, whose word cannot be believed on any subject.

**B**Y the time that the eminent counsel has reached this point with his expert witness, the latter's temper is, not unfrequently, perceptibly ruffled; and thenceforth he is the lawyer's unresisting prey. With an occasional prod to keep up his exasperation, he can be made to say all sorts of things that he does not mean, to contradict himself, and, in general, to discredit his testimony and himself thoroughly before the whole court, of course, to the extreme satisfaction of the opposing party. Many a just cause, and many a professional reputation, has been injured in this way; and the fault is not wholly on the lawyer's side. He is paid to make his client's case look as well as possible, and the opposite party's case look as badly as possible, and the witnesses with whom he has to deal ought to bear this in mind, and study his ridiculous questions, his pretended indignation, his lofty rhetoric about the investigation of truth, his honeyed, but treacherous compliments, and his studied provocations, as an interesting display of skill in the arts by which he earns his living. To meet these successfully, nothing is really necessary but a good knowledge of the subject on which the evidence is to be given, a quiet temper, and a modest and earnest demeanor. These will produce an impression on jurymen who may be incapable of understanding the evidence itself, and they will add tenfold to the value of the evidence in the minds of jurymen who can understand it. It is due to the profession to say that all lawyers do not condescend to the tricks by which a witness is confused or discredited. Many of the best ones, even before a jury, will ask from an expert witness only the truth, as he understands it. Of course, if they can ascertain from him facts favorable to their side, they are glad to do so; but they will not endeavor to prevent him from giving testimony favorable to the other side by confusing or ridiculing him; and, in the end it is probable that their cause generally gains by this considerate conduct.

**W**E imagine that even our English cousins, who have a high opinion of the dryness of our atmosphere, will hear with incredulity of a project for putting automatic-sprinklers over the Delaware River, to keep it from catching afire. Nevertheless, it is not long since the Welsbach Light Company met with a loss, which is recorded in the Boston Manufacturers' Mutual Insurance Company's Report for December, owing to the fact that some small boys applied a lighted match to the surface of the Delaware River near their factory, at Gloucester, N. J., and the flames so kindled ran up a stream, which emptied into the river at that point, and burned their wharf, situated on the stream. Of course, the explanation is that the stream receives sewage from their factory, and with the sewage is mixed a good deal of oil, which floats on the water in such quantity that it can be lighted; but this explanation does not lessen our surprise that so much good oil should be allowed to run away and spoil so much good water.

**A**NOTHER report of the Boston Manufacturers' Mutual Insurance Company calls attention, incidentally, to the danger attending the careless use of mineral wool in certain cases. Every one knows that this substance is made by blowing steam or air through melted iron slag. The slag is a sort of impure glass, and the "wool" is, therefore, a mass of fine threads of glass, interspersed, usually, with globules. The threads, though very slender, being finer than cotton fibres, are of glass, and, as the Report points out, pieces of them may, unless the material is carefully handled, get under the nails, or into the skin, causing painful irritation; and when the dust from it is incautiously breathed, it has been known to produce hemorrhage. A similar material is "rock wool," which is said to be made of melted glass, and the fibres of which are even sharper and harder, and, therefore, more capable of inflicting injury, than those of the slag-wool. It may be noticed that the men who apply the mineral-wool, which, it is needless to say, is very extensively used in building, for packing pipes, filling-in partitions and floors, and so on, do not handle it much, using sticks to compact it in place; and those who have occasion to use it as amateurs will do well to imitate this precaution.



## ARCHITECTURE IN AMERICA: A FORECAST.

[THROUGH the courtesy of the editors of *Lippincott's Monthly Magazine* we are enabled to lay before our readers what in all probability is the last contribution that the late John Stewardson made to the literature of architecture. — Eds.]

**L**AWYERS and doctors tell us there are so many law and medical students that the professions will be scandalously overcrowded in the next few years. Painters deplore the swarms of ambitious young men in the studios, and assure us there will be no room for them in the future. As for writers, they lament about the overstocked condition of the literary market until one is quite tired of hearing about it.

It is, therefore, with some trepidation that I make the easily substantiated statement that the increase in the number of students in these callings is small compared with their increase in that of architecture. About fifteen years ago, for instance, there were sometimes half a dozen Americans studying in Paris, sometimes one. For the last five years there have been from forty to sixty, while Americans have been frequenting, besides, the schools of Berlin, Vienna, Florence and Rome. To take an example nearer home, six years ago the long-established School of Architecture of the University of Pennsylvania contained two students: this year there are over a hundred; and so it goes, from the Atlantic to the Pacific. Moreover, this increase in numbers does not include the men who are getting their training in offices without going to the technical schools at all.

It may seem strange that with this unparalleled amount of serious work in architecture no one can yet say what the outcome of it will be as to that much mooted question, the American style. Among architects, nothing is so much talked about, argued about, almost fought about. Nor does this field of discussion lie fallow among laymen. The people of this country never took so much intelligent interest in architecture as they do to-day. On every hand one hears discussions over the merits and demerits of the latest office-building or the beauties of the newest church. This is not to be wondered at in a community eager to learn, eager to travel, eager to adopt new ideas, and interested, perforce, in building; interested in architecture, too, for the hordes of young students now spread broadcast over the land are not slow to disseminate, at least, some of their newly acquired knowledge among their families, so that thousands of people who never looked interestedly at a building before now take issue on the question as to whether Gothic or Romanesque is the more appropriate style for a railway-station. Of course, architects laugh at all this talk, but it would be as well for them to remember that there can be no healthier sign of the natural growth and development of good taste in architecture than this earnest desire for knowledge on the part of the public. After all, it is the despised public that pays, and it is the same public that gives itself the right to dictate styles as well as other conditions to its employed servant, the architect. Unquestionably, the more the mass of the people know of historic styles, the less will be the demand for the nondescript and the commonplace, and the sooner will come to the front those scholarly designers who are worthy of the place.

In this state of things the vital question is, How shall the designers themselves be best trained? The most prominent architects of the country, those whose work is acknowledged by common consent to be the best and most lasting, reply that the School of Paris and those patterned after it are the proper training places. There are many thoughtful people, however, who do not believe this to be the case, maintaining that the theories of the French school have produced a monotonous, uninteresting style, quite bad enough in its native country, and utterly out of place in this.

The immediate outlook, therefore, for the solution of the "American style" is not cheering. But it seems as though we were more nearly in a position to make a shrewd guess at it than ever before.

Let us see a little what the conditions are. In this country we continued until within forty years or so to copy England in a humble way. We copied her, of course, when we were a colony; we followed her faithfully through the reign of the Italian villa, the epoch of Victorian Gothic and the so-called revival of Queen Anne. In England itself these styles were of a forced and unnatural growth, and did not last long. In this country the flimsy imitations of them fared no better. For that matter, people did not, until within comparatively recent years, think it necessary to employ an architect for domestic work, particularly for city houses. Of these latter, there were in Philadelphia (which we may take as a town of average intelligence) practically but two types of house, the single and the double. These houses were all designed to be between party-walls, and where a house happened to be on a corner no change was made in the plan, so that the astonishing spectacle is presented of a corner house twenty-four feet wide, full of windows on the front and back, with an uninterrupted brick wall on the side, and, of course, full of rooms either insufficiently lighted or without any light at all. In these days, when light and ventilation are so much sought after it seems almost impossible to realize such a state of affairs. It was natural enough then that when men began to be trained as architects and had learned through books and through travel of the unlimited possibilities of their profession they should have burst loose from all conventionality and revelled in unrestrained license of design.

Among all the architects of that day, Richardson stood out pre-

eminent. He had grafted his Paris training onto a deep study of the Romanesque architecture of Burgundy and Auvergne. He reasoned that in America we were in a position, so far as the ornament of the building goes, very similar to that of the builders of the monuments which he studied; that is, we were without good carvers, but had vast resources in the way of different colors and textures of stone; that, therefore, stones inlaid in patterns of blue and brown and white, with such primitive, if intricate, carving as was adapted to the style, would be the best means of producing an effect. This was undoubtedly good reasoning, and when he brought to its aid his own skill as a designer, backed by his tremendous energy, it is not surprising that his work and the copies of it spread from east to west over the whole extent of the United States. It came to be a settled fact in the minds of many people that Romanesque was the long-sought-for American style, and that there was no use in seeking any farther. So his school flourished as no one man's school has in this country before or since. Yet to-day his influence is waning year by year, and at the present rate will soon amount to almost nothing.

He was by no means alone, of course, as the introducer of a style in this country. All around him there sprung up copies of Venetian palaces and Pompeian houses; there arose Gothic office-buildings and Moorish theatres. Meanwhile, there was growing side by side with the Richardson school something that was in marked contrast to it — a strong influence in favor of Classic proportions and Classic forms. So far from diminishing in the number of its followers, this school has been increasing steadily. Whether we like it or not, it seems to be forcing itself upon us, and no one who has thoughtfully considered the subject would be at all surprised if Classic should become the predominating feature of American design, as it has that of the cities of the world.

Communication between all civilized countries is now easy to a point heretofore undreamed of. We know what men wear in the capitals of Europe, and we copy them; we know what they build, and we copy that. The levelling process going on over the world makes men wear cylindrical hats in Paris and New York, and soon will in Pekin. Is it too soon yet to say that the same is true of the Five Orders?

The strongest minds in architecture have struggled against this apparently overwhelming force. Viollet-le-Duc fought as hard during his life against Classicism in France as Richardson did here. With the sanction of his Government, Viollet-le-Duc rebuilt millions of francs' worth of castles and palaces and churches, made roomful of drawings that are still the wonder and admiration of the architectural world, and wrote volumes upon volumes of argument and learning in favor of the principles of the Middle Ages. In England, Ruskin was fuming and fretting and composing magnificent treatises against the march of the Renaissance. Everybody read what he wrote, and a great many people practised it. But what is the result? The little school founded by Viollet-le-Duc hardly exists any more, if, indeed, it exists at all. His buildings are looked upon as instructive and amusing object-lessons. Ruskin is quoted as a master of English, and there is not a celebrated theatre or modern public building in the civilized world that is not designed after the principles of Classic architecture. It really seems in vain that men say that there never was a time like the present; that all architecture will necessarily be frittered away into a thousand different styles, because no one knows in what style to design; that we in America are without traditions worthy of the name, without noble examples of native architecture to be inspired from, and that for the first time in the history of man designers have in their hands documents relating to the architecture of all countries and of all ages, and have, what is more important still, endless opportunities of travel — a situation which makes it possible to have as many styles in America as there are architects. Hitherto, they say, the designer has never been under the necessity of making up his mind, as the moderns are, whether he shall build such and such a building in Rococo or in Early Chinese, but has simply worked along in the spirit of his age, in the style of his period, ignorant of the existence of any other, and has consequently been able to express himself better than we can hope to do, who are dabblers in all styles and masters of none. But people who argue on this premise overlook the fact that the French and Germans and Austrians and Italians are expressing their ideas in the medium of the day, the nineteenth-century Renaissance, and that we, by scattering our energies as we do, are leaving an opening which the believers in that very living style are not slow to take advantage of.

Suppose we examine these general conditions a little more closely. Beginning with domestic architecture in England, we find conditions very different from our own. There is in England no necessity for porches, for outside shutters, or for the fear of too much light from long rows of mullioned windows. Thus the English architects can and do design in the spirit of the old work with the greatest success. The thorough way in which this old spirit which all men, even those of Latin race, agree has made old English homes the most charming in the world, is being preserved in the new designs, in most agreeable contrast to the servile copying of the externals of style that at one time characterized English work. One is struck with the deepest admiration for such work as that of the late John Sedding, and of such living architects as Ernest George, Bodley and Garner, Basil Champneys and a host of men who are really designers in the

truest sense of the word, constantly evolving and inventing, and never straying off into styles foreign to the one which they have adopted.

Domestic architecture in France is in by no means such a fortunate condition, either because of the natural tendency that Frenchmen appear to have inherited to live in houses whose distinguishing mark is formality rather than comfort, or because of the overwhelming influence of precedent constantly kept alive by the school training of their architects. The houses are almost invariably devoid of homeliness and charm. In all the greatest of the other Continental countries the same conditions hold, excepting that each race exerts its natural influence on the style. But the style is everywhere the same — the nineteenth-century development of Renaissance — a style of which one phase has developed into another naturally and steadily, like any normal architectural growth, for nearly four hundred years.

The men who design in this style, which seems to us so cut-and-dried, look with the greatest appreciation upon the domestic architecture of America. They are constantly going to examine it, and are always loud in their praises of its perfect adaptability to the climate and of the charm of our interiors. As a rule, they find much more to be admired in this latter respect in this country than in England. But as for the exteriors of most of our newest country houses a Frenchman does not think it worth while to give an opinion, looking upon such straining after picturesqueness as amusing enough as a pastime, but not to be considered as serious architecture. These strictures do not apply to the class of city houses whose numbers are increasing so rapidly where the tendency is distinctly Classic. Nor does it apply with much justice to the so-called Colonial country houses. A European naturally sees in this latter development a cause for nothing but approval, since it is in his eyes a manifestation of the Classic movement and carries with it a certain amount of restraint in design and of good proportion.

If we look at the business buildings of Europe and America we find a difference just as striking as in private houses. In England the buildings are not very high, and are cut up into a multitude of small parts following the same styles that are used in country houses. There is little breadth of treatment, little grasping of what is known as the *grand parti*. On the Continent we find the style of the period used for the business buildings as well as for everything else. The treatment is broad but monotonous. The buildings are generally studied as a whole, well planned and well proportioned. There interest ceases, the detail being, as a rule, crude and unfeeling, in this respect materially different from that across the Channel. As for business buildings in this country, all the world knows what they are. There is very little good architecture about them, but a great deal of good engineering. Just now it is very much the fashion to praise the huge steel cages with their walls carried on the beams from floor to floor and the weight concentrated into a few vertical shafts, and they are unquestionably admirably adapted to their purpose, but, with very few exceptions, they are not architecture. There is not much more architecture in building a tiresomely long row of offices or apartments, all of exactly the same height and all devoid of any kind of treatment, one above the other, than there is in placing them side by side like any row of brick buildings. Indeed, the architects of some office-buildings are men who have never given thought to the principles of proportion, though, of course, it would be most unjust to the architects of the greater number not to acknowledge the ingenuity and skill with which they have grappled with an entirely new problem; while as for the structural ironwork, it is often as good as can be imagined. From an architectural point-of-view the greatest drawback to these disproportionate structures — and it is a very serious one, indeed — is the fact that they dwarf public buildings, churches and everything of a monumental character around them, utterly destroying restfulness and scale, and marring the general appearance of a city beyond repair.

When we come to official architecture, we find England not by any means in the first rank. The designs are sometimes Classic and sometimes a revival of Gothic, but, as a rule, lack the grandeur and simplicity of conception which characterize those on the Continent. It is there that we find the best results from the employment of the Classic orders.

In these civic and municipal buildings the use of columns and entablature, so far from being tiresome, is apt to impress one as fitting and dignified, while the planning is simpler and grander in its conception than anything we have yet an idea of in this country.

As for our own public buildings, with the exception of the Capitol at Washington and some early buildings of the School of Wren, they have, until comparatively recent years, been of such a character as to make us a laughing-stock in this respect for the rest of the world. We are just emerging from the impossible state of affairs when one man was set the task of designing all the public buildings in the country with the actual result that he designed none of them. And our municipal architecture has not been much better. It was possibly not the fault of our architects that most of the public buildings in America are badly placed. It is no one's fault but theirs that many of our towns are saddled with municipal buildings as ignorantly planned as those of Philadelphia.

But surely a new light is breaking. The mass of young draughtsmen and students that are enthusiastically studying the principles of design as taught in the Classic schools are getting a knowledge of

the three cardinal points which it is the boast of that school to teach — planning, proportion and profile — and that knowledge will go far to raise the standard of our civic architecture in the beginning of the twentieth century infinitely above what we are used to to-day.

To resume, then: we have seen that our country houses are developing a style in harmony with the exigencies of the climate and the needs of the people, and are often beautiful besides, that architecture is not necessarily absent from our business buildings, and that the need of skilled design is felt more and more in those devoted to public use. Is it not almost a certainty that with the future development of studious academic architecture throughout the country there is coming a wave of Classic that will have nearly as much influence over the American style as it has had for centuries over Europe? And is it not fair to assume that the fearless vigor that has marked our modern work, both good and bad, is going to give a distinction to the style of the twentieth century in America that will set it apart from that of the rest of the world? JOHN STEWARDSON.

#### SITE FOR THE SHERMAN STATUE.



interesting exhibit at the War Department of the competitive models for the equestrian statue of General Sherman is likely to rouse in the spectator the question, Where is this statue to be placed? and with this a feeling of the injustice, not to the artists personally, for they all share alike in the disadvantage, but to their art itself, in asking for competitive designs without any indication of the kind of location the proposed monument is to occupy.

It will readily be seen how a design of superior excellence in itself may fail of success, because not so well suited to certain finally chosen surroundings as another of less merit; also that every artist was placed in the trying dilemma, whether to try to adapt his work in a blind sort of way to all possible surroundings at the sacrifice of artistic completeness and strength, or to design with a view to an imagined combined effect of statue and environment at the risk of being thrown out for the want of these conditions. Even though the Army of the Tennessee might not have had it within their power to define the locality of the future monument, it would seem, at least, most desirable that there should be some authority to which appeal might be made for a decision of this question before the artists' designs are called in, rather than afterward. A National Fine-arts Commission, or a Bureau of Public Buildings and Monuments, for whose establishment by Congress there has been for some years and is now an increasing demand on the part of those interested in our public economy, would find an appropriate duty in providing by a well-conceived and far-sighted plan for the location of all conspicuous monuments in the National Capital.

As to the probable location of the Sherman Monument one hears strange suggestions; as, for instance, that it might suitably be placed in Franklin Square! This would mean, of course, either the sweeping away of the magnificent trees and rare flowering shrubbery of this beautiful park, or else the hiding away of the illustrious warrior in a secluded sylvan bower. While we might well place nymphs and the muses and even the poets in the retired and shady nooks of our parks, this would certainly not be the location for the monument of a great general.

An heroic statue demands heroic surroundings. These are best afforded either in a generous provision of open space, admitting of unbroken view from a distance, and a background of clear sky with no conflicting lines whether of trees or buildings to mar its own pure outline, or else the surroundings themselves should be of an artistic and nobler order of architecture with which the statue and its base can be made to harmonize, both as to scale and lines. That the fine Lafayette Monument suffers greatly from being so ill placed must be felt by every observer. This monument is practically hidden from view to the approach from three sides, and to the approach from the front it is only partially distinguishable from the masses of foliage, tree-trunks and branches behind and above it. No true idea of the proportions or outline of this monument can possibly be had from the site where it is placed. This will be admitted by any one who will imagine it placed, by contrast, across the avenue, at the head of the street, leading down between the Treasury and the White House, the point where opens the great vista, embracing the Washington Monument and the Potomac; or even one of the great porticos or terraces of the Capitol or of the Treasury, or of the State, War and Navy Department, than which it will be difficult to find finer sites for monuments of heroic character in any capital of any country.

The two most plausible suggestions of a site for the Sherman Monument would seem to be the one spoken of in the Senate some days ago in a bill proposing to assign a space for it in the east plaza of the Capitol, south of the statue of Washington, with a view to leaving the corresponding space on the north devoted to a monument to General Grant; or else at the north front of the War Department. Either of these would be sites of suitable dignity and largeness for the proper display of an art work of heroic dimensions. As for placing it in one of the avenue triangles or at some of the conspicuous street-crossings, there are already so many statues of this general character on these sites, that there is danger of each additional one losing its impressiveness, as well as reducing that of

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# AMERICAN ARCHITECT

## AND BUILDING NEWS

ADVERTISERS' TRADE SUPPLEMENT.

No. 164.

SATURDAY, FEBRUARY 1, 1896.

VOLUME LI  
No. 1049.

### THE "DORIC" HOUSE-HEATING BOILERS.

ARCHITECTS should be interested in a new line of Boilers that we are putting on the market. The illustrations herewith represented show very fully the construction of this new design of heating-apparatus and will enable the reader to understand its special features and its operation. In Figure 1 is presented a general view of the hot-water heater; Figure 2 is a sectional broken view revealing the internal construction, and Figure 3 is a similar illustration of the steam-boiler, the general features of which, it will be noticed, correspond with the hot-water boiler, the steam dome being larger, however, and it having all the steam appurtenances. In directing attention to this boiler, the manufacturers

3, exposed directly to the fire and extending from the centre  $1\frac{1}{2}$  inches deep by  $\frac{3}{4}$  inch thick, and so placed that they increase the direct-heating surface and cause a more rapid circulation of water and also receive the flame contact. It is particularly pointed out that the heating-surface presented to the direct action of the fire is very effective, that is, the fire shines on every portion of it. The circulation as shown in the illustration is vertical, and the surfaces, it is pointed out, are practically self-cleaning. An important feature, to which attention is directed, is that the tubes connecting the fire-pot to the dome or top have a series of flanges or webs cast to them, as shown in Figures 2 and 3, for about three-

made in one size for hot-water with a rated capacity of from 500 to 1,600 square feet, gross, and in one size for steam with a capacity of from 275 to 375 square feet of radiating surface gross. The Company have in preparation other sizes.

GURNEY HEATER MFG. CO.,  
BOSTON, MASS.

### OLD-TIME RELICS FROM AN OLD TIN-PLATE HOUSE.

CONSIDERABLE interest has been expressed in building circles in an exhibition of several pieces of old Roofing Tin now in the possession of N. & G. Taylor Co., Tinplate manufacturers of Philadelphia, and which are highly esteemed by the members of this concern as practical illustrations of the efficiency of the "Taylor Old Style" brand of extra heavy

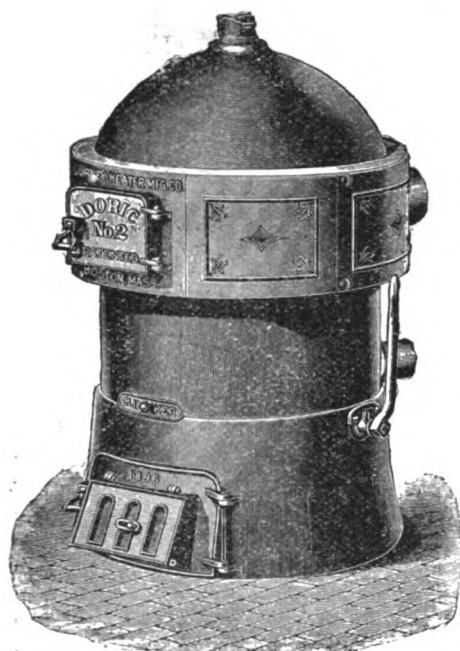


Fig. 1.—General View of Hot-Water Heater.

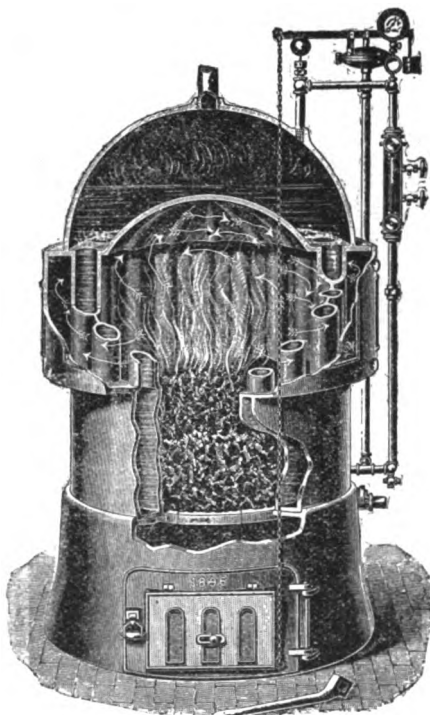


Fig. 3.—Sectional View of Steam Boiler.

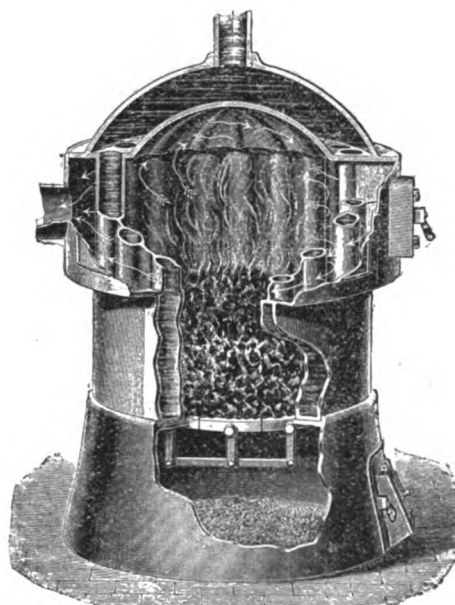


Fig. 2.—Sectional View of Hot-water Heater.

allude to the round fire-pot which they say is particularly well adapted to household use, as it secures better combustion and permits the fire to be more readily cleaned and avoids dead corners; furthermore, the circular form gives it much greater strength. The heater is a cored casting made in one piece without any joints whatever, and is, therefore, it is pointed out, durable and cannot leak, while with proper care it will last an indefinite period. The fire-pot is made corrugated on the side next the fire, thus largely increasing the heating-surface and having a series of  $2\frac{1}{4}$ -inch tubes, cast on, which run vertically into the dome. The latter is made with a series of ribs or extended surfaces cast to it, as shown in Figure

quarters of the circumference of the fire-pot on each side. This makes it impossible for the heat to escape from the fire-pot without first coming in contact with all the surfaces inside the heater. The flues are so constructed that they hold the products of combustion, which pass from the fire-pot near the front on each side and traverse the tubes on the outside before their final passage through the smoke outlet at the rear of the heater. Iron plate castings lined are provided around the tubes which, being removed, permit easy access for the purpose of cleaning. The boilers are believed to be adapted to any kind of fuel, as they have no surfaces to soot up. The Doric heating-apparatus are at present

coated Roofing Plates, under the severest tests of both time and wear.

One of these relics came from the roof of the old Bloodgood's Hotel, on Dock Street, Philadelphia. The old house was demolished some years ago to make room for the Pennsylvania R. R. Co.'s freight station. When the roof was taken off, notwithstanding the fact that it had been in active wear for forty-four years, the tin was found to be bright and perfect, and, in fact, just as good as when first put on.

The second, and, perhaps, no less important, feature of the exhibition, is a piece taken from the roof of a residence at Edgewater Park, N. J. This was put on in 1855, and



was in active service for thirty-five years, and never painted but once. The piece on exhibition certainly indicates that it is even now equal in every respect to the best plates, bright and new as they are now in stock, and for sale on the floor of the Company's warerooms.

The third piece on exhibition was taken from the roof of a building at Independence, Mo. This piece was sent by the owners of the building with a letter of explanation, stating that the roof had been in active service for over thirty years, and had never been painted.

Of course N. & G. Taylor Co. were delighted to be able to secure these tangible evidences of the lasting qualities of their favorite brands of Roofing Tin, and it is but natural that they should attach the highest possible importance to them as souvenirs of the early business success and history of the firm.

In 1830 roofing, or Terne plates, were first made in Philadelphia, and were then handled by Messrs. N. & G. Taylor Co., who state that there are at present in this city many tin roofs made from the "Taylor Old Style" brand that are in as good a state of preservation as when put on over sixty years ago.

It is claimed that the great wear secured in

to form a great variety of patterns can be of the greatest usefulness where a great amount of light is needed. Being translucent, but not transparent, they can be used for entire external walls, interior partitions, floors, roofs, ceilings, etc. Each brick containing an hermetically closed air-space, the wall composed of them is a first-class insulator; if the backs and sides are covered with quicksilver, side and rear walls lined with them become excellent and very ornamental reflecting surfaces; for the admission of light through walls on party lines where ordinary windows would be prohibited, these brick will become indispensable, and for very many other uses every-day practice will discover abundant opportunities.

#### MOORE'S IMPROVED WROUGHT-STEEL STORM-WINDOW FASTENER.

With this fastener, storm-windows can be adjusted from the inside in a minute without the use of a screw-driver or other tool than a small hammer, doing away with the inconvenience of climbing a ladder, and the windows are held in place more securely than in any other way yet invented. The cut shows the method of attaching the fastener, the flat

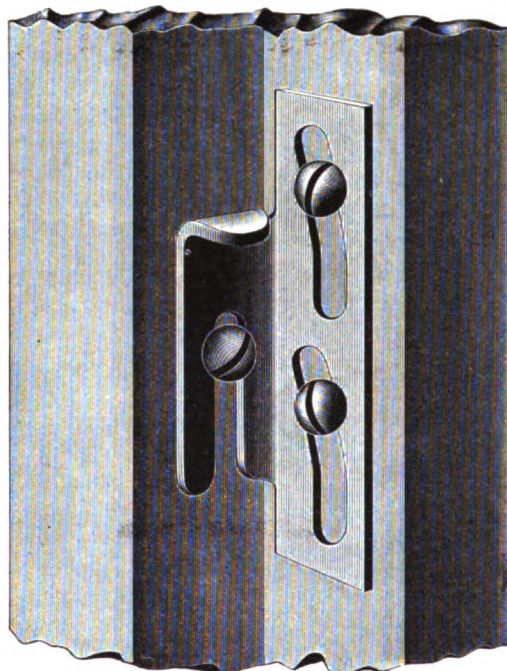
byterian Church, Oneonta, N. Y.; Masonic Hall, Summit, N. J.; St. John's Lutheran Church, Tamaqua, Pa.; Friends' Church, Indianapolis, Ind.; Opera-house, Bristol, Conn.; Centenary M. E. Church, Binghampton, N. Y.; 10th Battalion Armory, Albany, N. Y.; 1st Congregational Church, Everett, Wash.

We have just closed a contract for a new building to be finished before the first of October next for our occupancy. This building will give us double the number of square feet which we occupy at present, and enable us to add new lines to our business, as well as new facilities for the manufacture of the specialties for which we have had a wide reputation for many years past. The addition of new machinery and new facilities will enable us to furnish work quicker, and, therefore, with greater satisfaction to our patrons than ever before.

In this connection we desire to say that we have recently furnished quite a large amount of work covering ornamental ironwork for St. Albans, Vt., Worcester, Mass., New Orleans, and a number of other of the larger cities throughout the country. We are at present



Inside Fastener.



Outside Fastener.

the "Taylor Old Style" brand of Roofing Plates, is owing to each sheet being dipped by hand in open pots of heated metal, no rolls being used to squeeze off the metal coating, but instead of which, the sheets are placed upon racks to cool, every particle of coating being retained. Previous to the dipping, the black plates undergo what is known as the "Palm-oil process." The plates in this process are treated with pure palm oil, and do not come in contact with any acid flux.

Messrs. N. & G. Taylor Co.'s works are located on Tasker Street, between Swanson and Meadow Streets, and the public is invited to see how Roofing Tin is made.

N. & G. TAYLOR CO.,  
PHILADELPHIA, PA.

SEEING is believing, and those who had a chance to see the exhibit of the Falconnier Patented Glass Brick at the Chicago World's Fair easily realized that an extraordinarily useful building device had been invented and would shortly be brought within the reach of those who could utilize its many excellent properties to advantage.

The bricks blown, of bottle-glass, into various polygonal forms susceptible of being laid

surface being screwed to the storm sash, and the point mashing on to a screw in the edge of casing, the fastener is driven down with a small hammer, thereby drawing the window as tight as desired.

With this fastener, windows can be adjusted from the outside, and it is designed to be used on any windows where it is not convenient to use the inside fastener. The cut shows the method of attaching the fastener, the flat surface being screwed to the edge of storm sash and the hook mashing on to a screw in the casing, the fastener is driven down with a small hammer, thereby drawing the window as tight as desired.

In attaching fasteners to sash, do not drive screws in so far as to prevent fastener sliding up and down freely. Lasts a lifetime.

THE STANLEY WORKS,  
NEW BRITAIN, CONN.

#### NOTES.

AMONG the many prominent buildings that have recently adopted the system of reflectors manufactured by I. P. Frink, 551 Pearl St., New York, might be mentioned the following: Sacred Heart Hall, Indianapolis, Ind.; Pres-

at work upon the manufacture and erection of a large contract for wrought-iron fencing, gateways and arches for the handsomest residence in St. Louis, owned by Mr. John W. Kauffman, near the entrance of Forest Park, as well as a number of other contracts both for local use as well as outside of our city.

We trust with our new facilities that we shall hear from all parties requiring ornamental metal-work of any kind and of any finish throughout the country, assuring them of the lowest prices and the best quality of work.

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THE very large increase in the income from the sale of stamps during 1895 over 1894 is a very positive indication of returning business prosperity. Another indication which points to the same thing is the appearance of a greater number than last year of our old friends the advertising calendars—the most wasteful form of advertising that has ever been discovered. Like others we have received a great number, but can only keep and use one or two; the others in spite of their cost and attractiveness must go into the waste-basket.



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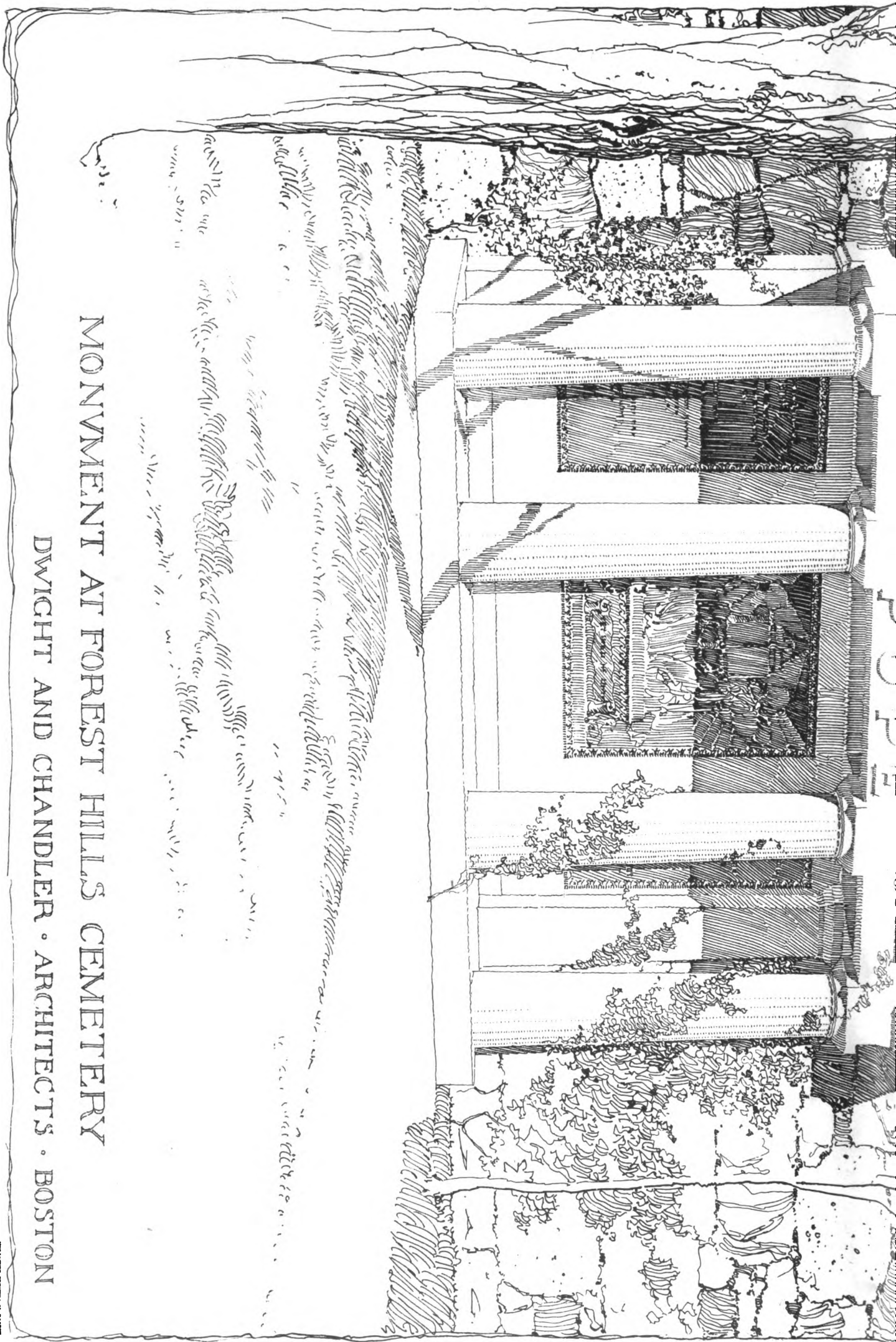
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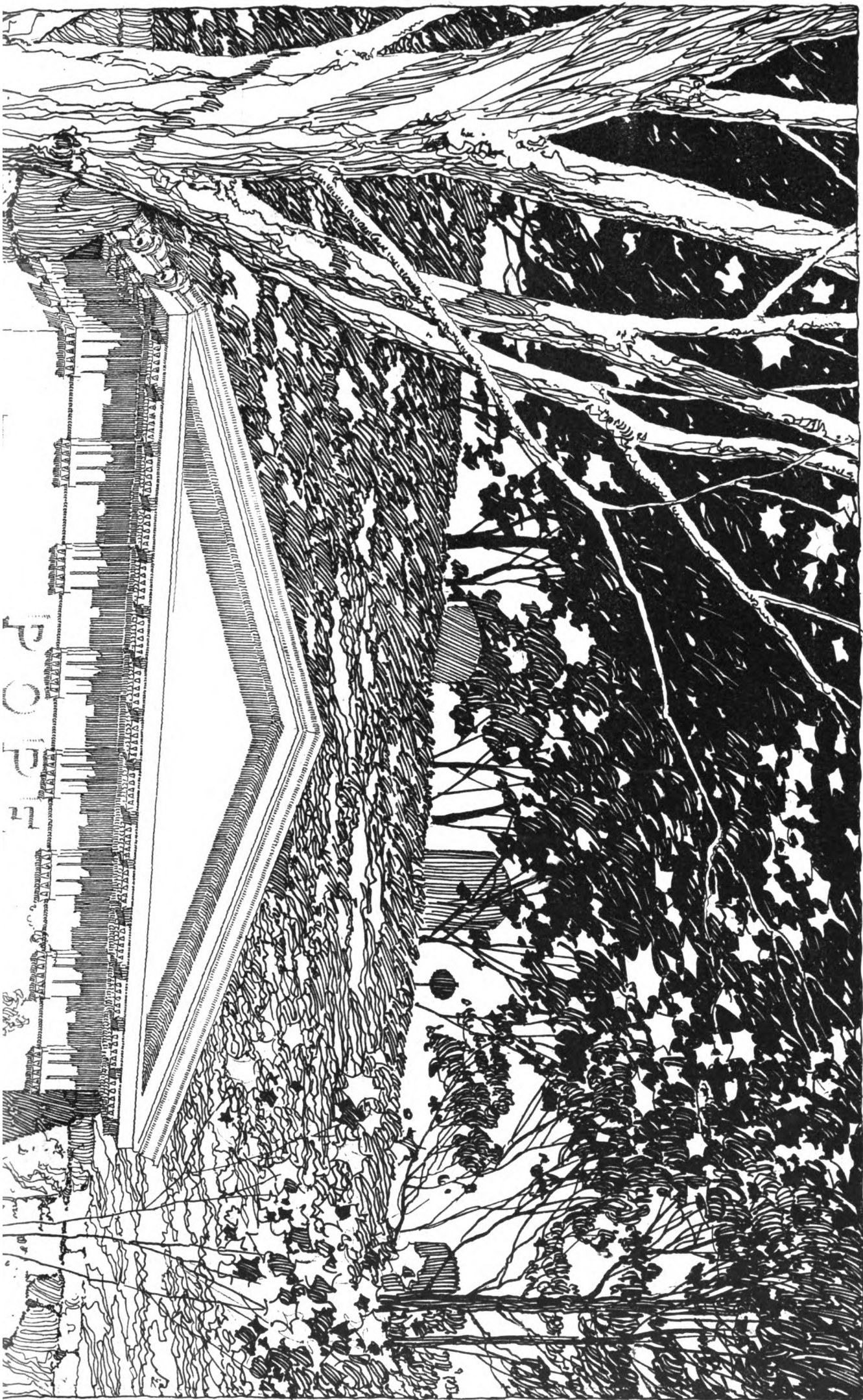
MONUMENT AT FOREST HILLS CEMETERY  
DWIGHT AND CHANDLER · ARCHITECTS · BOSTON

ILLUSTRATION BY J. B. BOSTON

No. 1049.

AMERICAN ARCHITECT AND BUILDING NEWS, FEB. 1, 1896.

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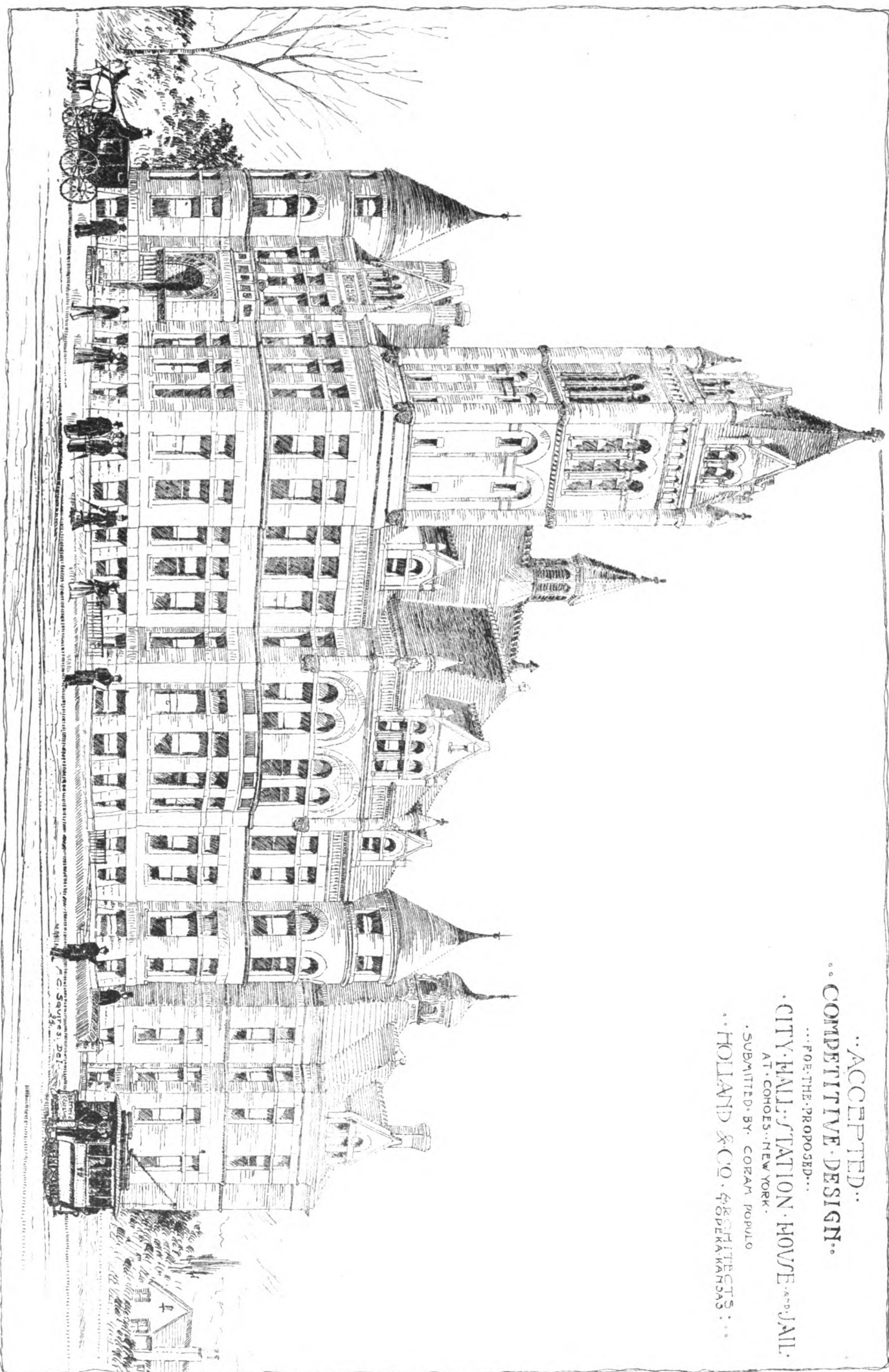








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CITY HALL STATION HOUSE AND JAIL.  
AT COHES, NEW YORK.

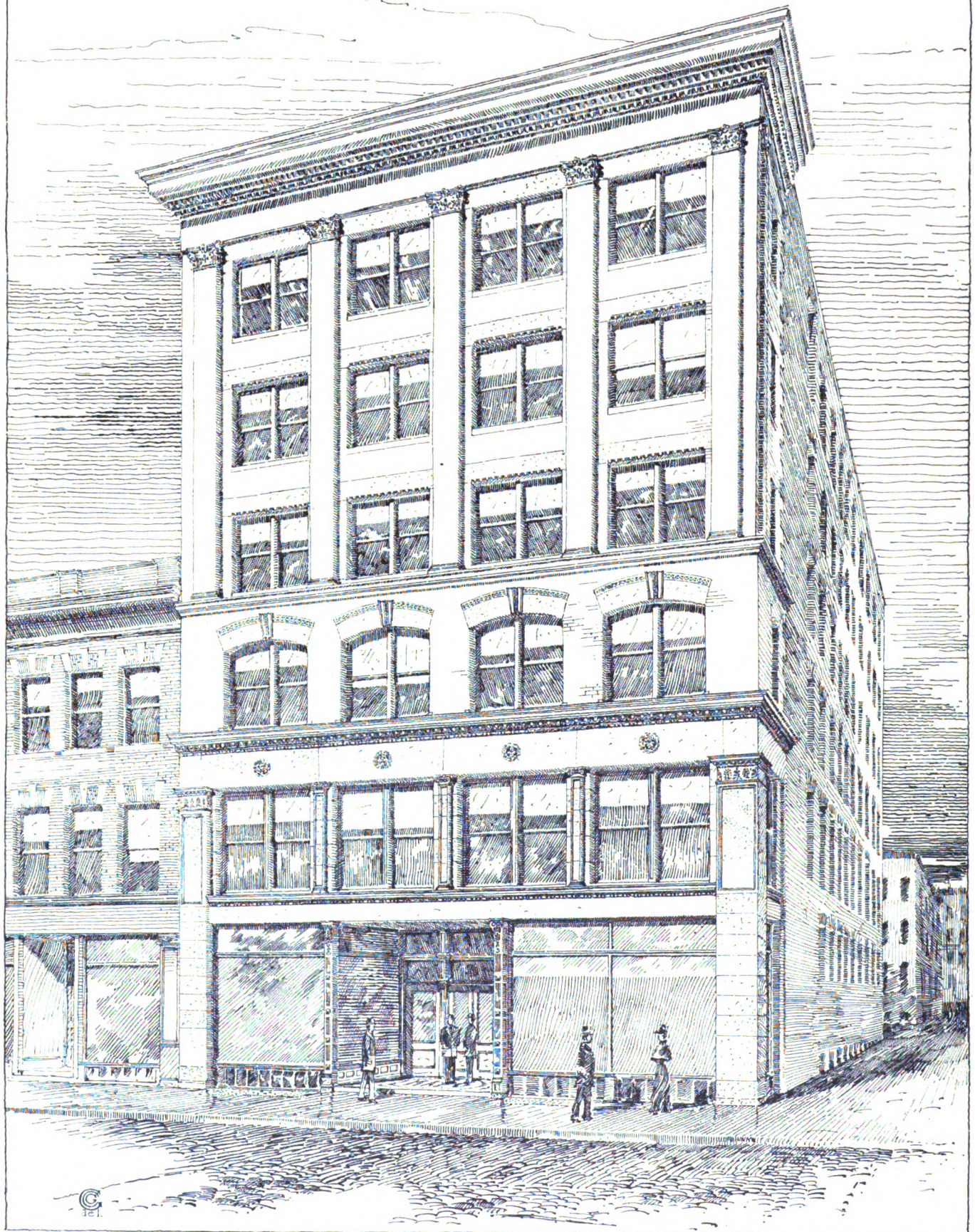
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HOLLAND & CO. ARCHITECTS...





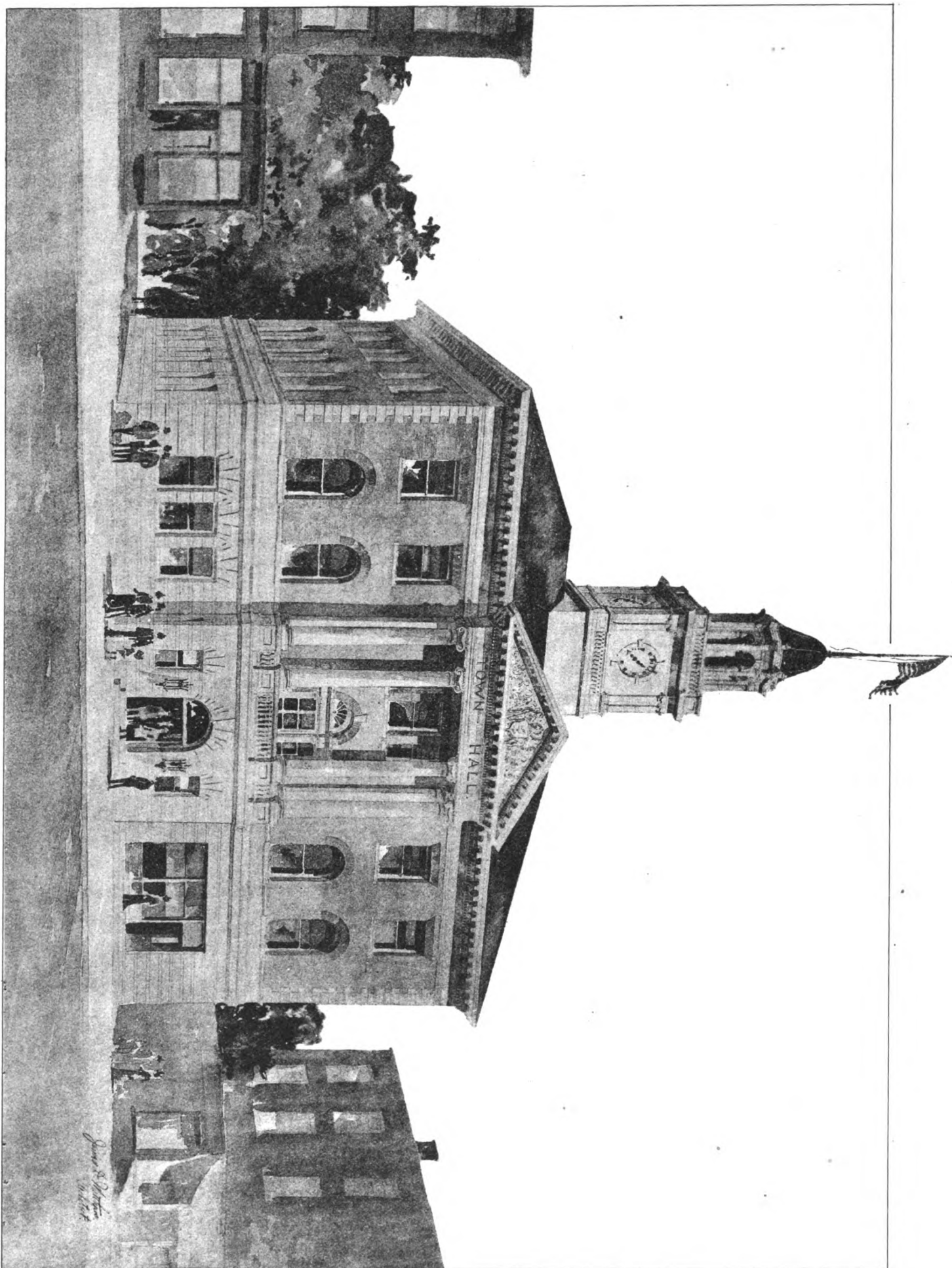
Business Premises for A. N. Mayo, Esq.  
Springfield, Mass. Gardner & Gardner, Architects.



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1896

MILBURY PRINTING CO., BOSTON



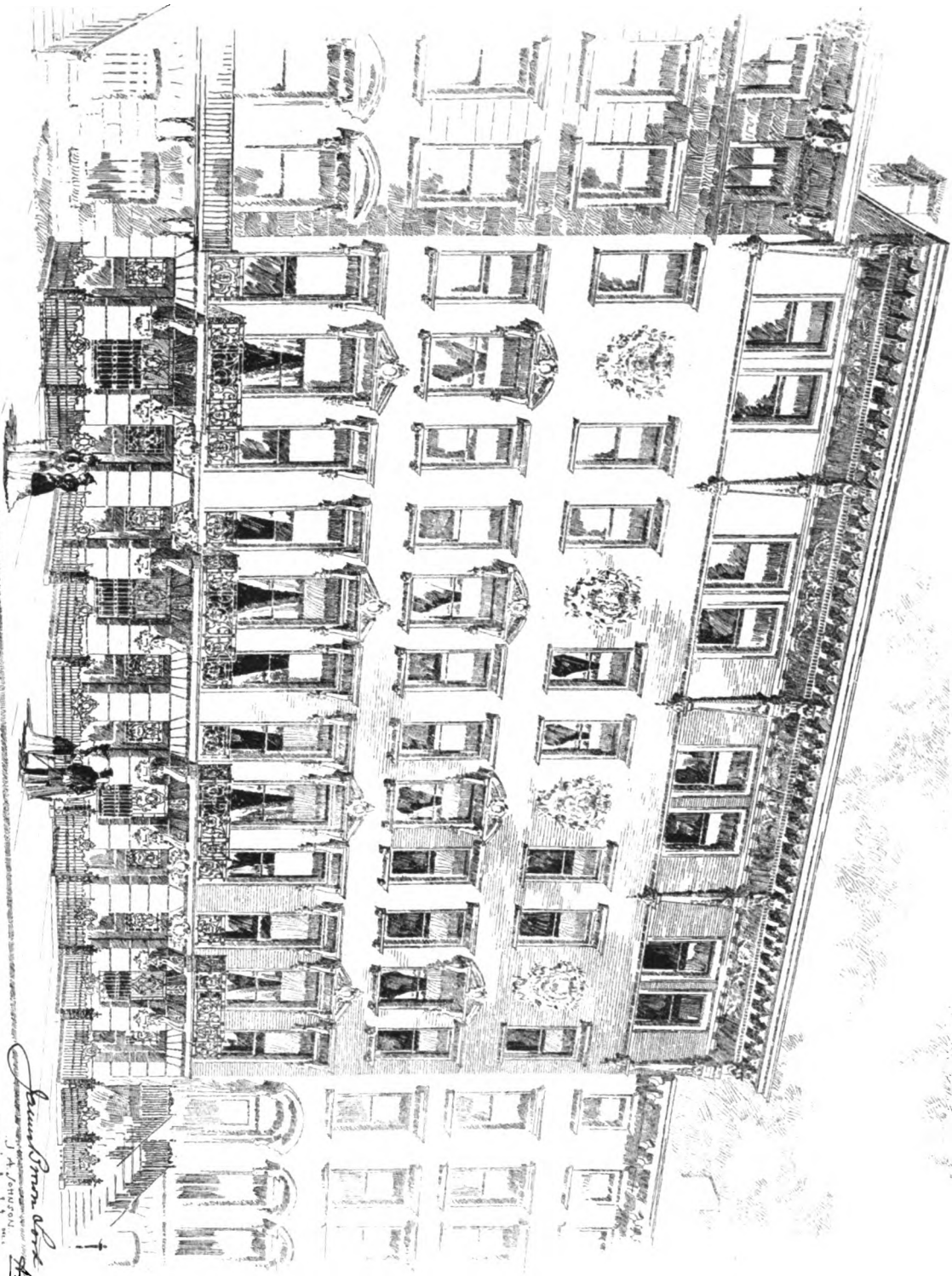


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Amongst our advertisers who have favored us this year in this way are R. Guastavino, whose offering is surmounted with a cut of the dome of Grace Universalist Church at Lowell, Mass.; Follansbee Bros. Co., of Pittsburgh, Pa., whose card is decorated with an excellent imitation of the coating of "Scott's Extra-coated" Tinplate; the Gurney Heater Mfg. Co., of Boston, who decorate theirs with an excellent reproduction of Checa's animated "Roman Chariot-race"; the Samson Cordage Works, of Boston, who make a successful play upon words by using upon theirs a similar copy of Bonnat's "Samson and the Lion"; the Spaulding Print Paper Co., of Boston, who make an ingenious display of the methods by which the "Brownies" conduct their blue-printing; the National Sheet-Metal Roofing Co., of Jersey City, who have turned out of a model of one of their shingles not only a calendar, but a match-box and pincushion as well; the Bangor Roofing Slate Manufacturers' Association, of Bangor, Pa., bearing the fac-simile of their certificate of guaranty, and Frank B. Gilbreth, of Boston, who sets forth the merits of the "Weymouth Seam-face Granite" on a calendar of greater merit, typographically speaking, than any of the others.

## BUILDING INTELLIGENCE.

Reported for the American Architect & Building News.

### APARTMENT-HOUSES.

St. Louis, Mo. — Three two-sty flats, s s Caroline St., bet. Ewing and Montrose Sts.; \$5,000; own. and bld., Henry Luepke.

### CHURCHES.

Germantown, Pa. — Main and High Sts., stone and brick First Methodist Episcopal Church; arch., Rankin & Kellogg, 1024 Walnut St., Philadelphia.

### CLUB-HOUSES.

Lakewood, N. J. — Two-sty frame club-house, 45' x 90'; cost about \$12,000; own., Ocean County Hunt & County Club; general con., R. & A. W. Borden, of Shrewsbury; arch., M. W. Morris, 45 Exchange Pl., New York City.

Merion Station (P. R. R.), Pa. — Three-sty and basement brick and stone Merion Cricket Club-house; arch., Furness & Evans, Provident Building, Chestnut and 4th Sts.

Monmouth Beach, N. J. — Two-sty frame club-house; cost about \$22,000; arch., Romeyn & Stever,

# HEATING AND VENTILATION

Plumbing; Gas and Steam Fitting; Municipal Engineering; Mechanics; Mechanical Drawing; Electricity; Architecture; Architectural Drawing and Designing; Masonry; Carpentry and Joinery; Ornamental and Structural Iron Work; Steam Engineering (Stationary, Locomotive or Marine); Railroad and Bridge Engineering; Coal and Metal Mining; Prospecting; English Branches.

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### BUILDING INTELLIGENCE. •

(Club-Houses Continued.)

48 Exchange Pl., New York City; con., R. H. Hughes.

### EDUCATIONAL.

North Wales, Pa. — Three-sty brick and stone school-house; arch., Crawford H. Coates, Jr., 1107 Walnut St., Philadelphia.

### FACTORIES.

Chicago, Ill. — J. M. Berry, seven-sty brick factory-building, 84-96 East Ohio St.; \$100,000.  
Armour & Co., four-sty brick factory, 3116-22 Benson St.; \$25,000.

Philadelphia, Pa. — Reed St. and Schuylkill Ave., three-sty rubber shoe manufactory, 54' 4" x 203' 8"; own., Geo. Wilkinson, Providence, R. I.  
Woodland Ave. and Seventieth St., two-sty brick factory, 50' x 100'; own., Jno. B. Riehl.

### HOTELS.

New York, N. Y. — Fifth Ave., s w cor. 43d St., eight-sty brick and stone hotel, 25' x 115', 98' high, mansard and flat roof, stone front; \$150,000; own., David H. Klip, Jr., 4 West 43d St.; arch., Howard & Cauldwell, 31-33 Pine St.

### HOUSES.

New Rochelle, N. Y. — Two-and-one-half-sty frame dwell., 29' x 41' 6"; \$3,500; arch., Palliser, Palliser & Co., 237 East 44th St., New York City.

Newtonville, Mass. — Birch Hill, two-and-one-half-sty frame dwell., 30' x 40', pitch roof; own., Elias Jones; bld., H. W. Fales; arch., Chapman & Frazer.

Grand Ave., nr. Boulevard, two-and-one-half-sty frame dwell., 42' x 32', hip roof; own., Mrs. George A. Chapman; bld., G. J. Wilf; arch., O. F. Smith.

New York, N. Y. — St. Nicholas Ave. and West One Hundred and Forty-seventh St., 6 four-sty brick and stone dwells., 16' x 20' x 52', 60' high, brick and limestone fronts, flat tin roofs; \$8,000; own., Wm. Brandt, 403 West 148th St.; arch., F. P. Dinkelberg, 1 Union Sq.

Fifty-ninth St., n s, 325' e West Boulevard, 5 three-sty and basement brick and stone dwells., 15' x 52' x 56', 43' high, flat tin roofs, brick and stone front; \$39,000; own., C. Urene, 741 East 14th St.; arch., John P. Leo, 2 East 125th St.

Paterson, N. J. — Two-sty and attic frame and granite dwell., 42' x 48'; cost about \$16,000; arch., F. W. Wentworth, Paterson National Bank Building.

Philadelphia, Pa. — Ludlow St., n s, e 45th St., 14 two-sty brick dwells., 14' x 46'; own., H. C. Lowden, 4122 Market St.

Dudley St., s s, and McKean St., n s, bet. 7th St., 14 two-sty brick dwells., 14' x 35'; cost about \$1,700 each; own. and bld., Wm. J. Smith, 1821 South 5th St.

Third St., s Olney Ave., two-sty brick dwell., 16' x 42'; own., Peter J. Norgarde, 3d St.

Dudley St., s s, e 7th St., 5 two-sty brick dwells., 14' x 34'; own., Wm. J. Smith, 1821 South 5th St.

Twelfth St., s e cor. 6th St., 3 two-sty brick dwells., 14' x 28'; own., Mrs. E. R. Dickson, 1503 Girard Ave.

Dauphin St., No. 2623, two-sty brick dwell., 16' x 55'; own., James O'Neill, 2623 Dauphin St.

Pittsburgh, Pa. — Two-sty cottage; own., Dr. Gale French; arch., Boyd & Long.

### BUILDING INTELLIGENCE.

(Houses Continued.)

Linden Ave., two-sty and attic brick dwell.; own., Miss Van Buren; arch., F. O. McKee, 106 Fourth Ave.

Point Pleasant, N. J. — Two-sty and attic frame dwell., 25' x 33'; cost about \$5,000; arch., J. E. Boker, East Orange.

Providence, R. I. — Chalkstone Ave. and Marion St., two-and-one-half-sty frame dwell.; own., Ellen T. F. Ward.

Rhodes and Carver Sts., three-sty double frame dwell.; own., Emma A. Handy; bld., Daniel F. Handy.

Eddy St., 3 two-and-one-half-sty frame dwells.; own., James Barlow; bld., J. N. Sharp.

Whitney St., No. 22, two-and-one-half-sty frame dwell., own. and bld., Jesse L. Chedell.

Ridgewood, N. J. — Two-sty and attic frame dwell.; own., Chas. Wilkinson.

Rochester, N. Y. — Sibley Pl., frame dwell.; \$10,000; own., A. H. Strong; arch., Fay & Dryer; bld., F. J. Sauer.

Roseville, N. J. — Two-sty and attic frame dwell.; cost about \$4,000; own., Thos. Perkins, 321 Sussex Ave., Newark; arch., B. F. Hard, Provident Building, Newark.

Seabright, N. J. — Cottage; cost about \$5,000; own., Tailor H. Solomon; con., A. A. Taylor, Asbury Park.

Somerville, Mass. — Hudson St., No. 8, dwell.; own., G. A. Gardner; bld., Arthur W. Berry.

Farragut Ave., nr. Garrison Ave., dwell.; own. and bld., J. A. Martin.

Atherton St., nr. Central St., dwell.; own. and bld., J. G. Polingdestor.

Crocker St., nr. Crown St., dwell.; own. and bld., J. G. Polingdestor.

Belmont St., nr. Somerville Ave., dwell.; own., Annie L. Haddie; bld., James P. Haddie.

South Orange, N. J. — Two-sty and attic frame dwell., 35' x 45'; cost about \$7,000; own., Capt. W. G. Shackford.

Southport, Me. — Two-sty frame cottage, 25' x 30', gambrel roof; own., J. W. Brackett, Boston; arch., Gay & Proctor, Boston; not let.

St. Louis, Mo. — Three two-sty dwells., s s Evans St., bet. Newstead and Taylor Sts.; \$12,000; own., Lizzie C. Terry; bld., J. R. Boughton.

Two-sty dwell., s s Laclede St., bet. Taylor and Newstead Sts.; \$3,300; own., J. N. Verdier; bld., W. P. Slars & Bro.

Two-sty dwell., s s Folsom St., bet. Klemm and Tower Grove; \$3,000; own., Wm. S. Drosda; bld., Fred Stiel.

Two-sty dwell., s s Pine St., bet. Boyle and Newstead Sts.; \$5,000; own. and bld., K. C. Paul.

Two-sty dwell., n s Arsenal St., bet. McNair and Wisconsin Sts.; \$3,000; own., Edward Gideonson; bld., C. Gideonson.

Two two-sty dwells., n s President St., bet. Wisconsin and Lemp Sts., \$6,000; own., Otto Emmendorfer; bld., G. H. George.

Two-sty dwell., s s Delmar St., bet. Sarah and Whittier Sts.; \$4,800; own. and bld., C. R. H. Davis.

Three dwells., s s Russell St., bet. Vandeventer and Lawrence Sts.; \$4,000; own., Concordia Imp. Co.; bld., R. L. Mackey.

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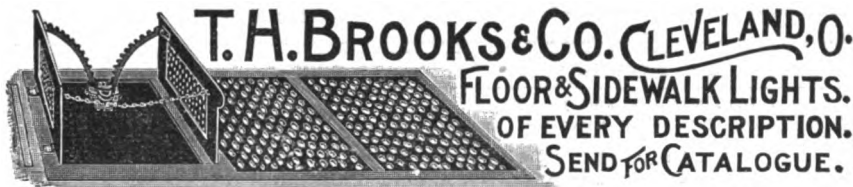
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### BUILDING INTELLIGENCE.

(Houses Continued.)

Ware, Mass. — Two-and-one-half-st'y frame dwell., 56' x 40', gable roof; \$8,500; own., A. J. Davis; arch., Gay & Proctor, Boston; con., D. G. Smith.

West Hoboken, N. J. — Two two-st'y and attic frame dwells.; cost about \$5,000; own., Wm. Spelling, Jersey City.

Nine two-st'y and attic frame dwells.; cost about \$35,000; own., Howard Lauche.

Winchester, Mass. — Two-st'y frame dwell., 30' x 40', gambrel roof; own., Geo. A. Woods; arch., Robt. Colt, Boston.

Two-and-one-half-st'y frame dwell., hip roof, 30' x 44'; own., E. A. Bigelow; arch., Robt. Colt, 85 Water St., Boston; not let.

Worcester, Mass. — *Reeves St.*, three-st'y frame dwell.; own., J. H. Skogland; con., Tupper & Skogland.

*Bancroft St.*, three-st'y frame dwell.; own. and con., C. A. Stone.

*Frederick St.*, three-st'y frame dwells.; own., A. R. Nilson; con., L. M. Petterson.

Wyckoff, N. J. — Two-st'y and attic frame dwell.; own., James Winters.

### MERCANTILE BUILDINGS.

Boston, Mass. — *Tremont St.*, No. 55, Ward 6, nine-st'y brick building, 54' x 75' x 142', flat roof; own., L. A. Willard & A. T. Sise, trustees; arch., Burr & Sise; not let.

New York, N. Y. — *Nassau St.*, n w cor. Pine St., eighteen-st'y marble, granite and brick office-building, 36' x 80', 23' high, brick and brownstone front; \$350,000; own., Donald MacKay, Englewood; arch., John R. Thomas, 160 Broadway.

*Central Park West*, n w cor. 66th St., five-st'y and basement office-building, club-room, riding and bicycle rings, 150' x 100', 77' and 94' deep, brick front, asphalt and gravel roof; \$300,000; arch., Geo. W. Jenkins, Morristown, N. J.; arch., Henry F. Kilburn, 656 Eighth Ave.

Philadelphia, Pa. — *Chestnut St.*, Nos. 927-31, eight-st'y Indiana limestone office and banking-house, 48' x 122', \$110,000; own., City Trust, Safe Deposit and Surety Co.; con., Jno. Duncan, 905 Chant St.

### STABLES.

Brooklyn, N. Y. — *Grind Ave.*, e s, 290' s Park Ave., two-st'y brick stable and dwell., 25' x 100', tin roof; \$6,000; own., F. E. Rosebrook, 37 Washington Ave.; arch. and bld., C. Schneider, 122 Debevoise St.

Germantown, Pa. — *Washington Lane*, s s, near Stanton Ave., two-st'y brick stable, 18' x 28'; con., Thos. Wright & Son, 22 Harvey St.

*Green and Johnston Sts.*, two-st'y brick and stone stable and carriage-house, 28' x 60'; own., A. H. Lippincott; arch., Hazellhurst & Huekel, Girard Building, Philadelphia.

### BUILDING INTELLIGENCE.

(Stables Continued.)

Philadelphia, Pa. — *Bancroft St.*, Ward 26, two-st'y brick stable, 14' x 31'; con., James J. Brennan, 1624 South 18th St.

Somerville, Mass. — *Lake St.*, No. 40, frame stable; own. and bld., L. E. Brown.

*Summer St.*, No. 341, frame stable; own. and bld., L. E. Cliff.

*Garfield Ave.*, nr. Mystic Ave., two-st'y 30' x 90' stable; own., F. O. Reed; bld., C. O. Stone.

Worcester, Mass. — *Frederick St.*, one-st'y frame stable; own., A. K. Nilson; con., L. M. Petterson.

### STORES.

Brooklyn, N. Y. — *Dushwick Ave.*, s e cor. Moffat St., three-st'y brick store and dwell., 25' x 68', tin roof; \$4,500; own. arch. and bld., George Fletcher & Sons, 95 Moffat St.

*Broadway*, n s, 277' e Varet St., three-st'y brick store and flats, 50' 6" x 18' 5 1/2" x 28' 10", tin roof; \$1,750; own., C. E. Cobb, 179 Montague St.; arch., W. M. Coats, 240 Flatbush Ave.

Buffalo, N. Y. — *Swan and Hagerman Sts.*, three-st'y brick building for 8 stores and 18 flats; \$37,000; own. and bld., S. W. Barrett; arch., John G. Balsam.

Chicago, Ill. — C. A. Carlson, 2 three-st'y brick stores and flats, 6730-32 South Halsted St.; \$16,000.

W. J. Turner, four-st'y brick stores and flats, 252-256 North State St.; \$18,000.

Jno. P. Nelson, three-st'y stores and flats, 1077 Sheffield Ave.; \$5,000.

B. A. Evans, three-st'y brick store, 296 South Clark St.; \$3,500.

J. Woerner, four-st'y brick store and flats, 324 North Franklin St.; \$7,000.

B. M. Zalleck, four-st'y brick store and flats, 442 West Van Buren St.; \$7,000.

Indianapolis, Ind. — *Meridian St.*, Nos. 52-56, five-st'y brick and stone store-building; \$16,000; own., Henry Schnull; arch., Vonnegut & Bohn.

Omaha, Neb. — *Eighteenth and Farnam Sts.*, brick and stone store and flat building, 66' x 132', composition roof; \$30,000; own., G. G. Davidge; arch., Charles Berndorf; con., John Rasmussen.

Philadelphia, Pa. — *Bainbridge St.*, n e cor. 7th St., three-st'y stone and brick store and dwell.; own., E. J. Warrington; con., Geo. W. Payne & Co., 401 Juniper St.

Somerville, Mass. — *Webster Ave.* cor. Norfolk St., building for stores and five tenements; own., Wm. Breyant.

St. Louis, Mo. — Three two-st'y stores and flats, s w cor. Burd and Ridge Sts.; \$6,200; own., Patrick Noonlan; bld., Chr. Lenberg & Son.

Two-st'y store and dwell., n w cor. Carter and De Soto Sts.; \$3,000; own., John Lieffing; bld., Geo. Peters.

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### BUILDING INTELLIGENCE.

#### TENEMENT-HOUSES.

Cambridge, Mass. — *Spring St.*, No. 163, tenements and store, 16' x 80'; own., James McClarey; bld., McGahey & Byrne.

New Haven, Conn. — *West Water St.*, three-st'y brick tenement, 35' x 40'; own., Isaac Brown; arch., Geo. C. A. Brown; not let.

*Eaton St.*, frame tenement, 34' x 46'; own., Harris Marles; arch., Geo. C. A. Brown; not let.

Philadelphia, Pa. — *South Seventh St.*, Nos. 718-22, four-st'y brick tenement, 44' x 45'; bld., W. J. Murphy, 263 South 10th St.

Somerville, Mass. — *Moreland St.*, nr. Meacham St., 2 double tenements; own., J. W. Wilber; bld., J. C. McLennon.

St. Louis, Mo. — Two two-st'y tenements, e s McNair St., bet. Lynch and Pestalozzi Sts.; \$3,800; own. Thos. Wolfe; bld., Klutho & Boeke.

#### THEATRES.

New York, N. Y. — *Lexington Ave.*, e s, 73' s 42d St., four-st'y brick theatre, 62' x 198', 60' high, flat and peaked roof, brick, with stone and terra-cotta trimmings front; \$170,000; own., B. & O. Golet, 9 West 17th St.; arch., J. B. McElfatrick, 1402 Broadway.

#### WAREHOUSES.

Philadelphia, Pa. — *Washington Ave.*, seven-st'y brick, iron and stone warehouse, 150' x 200', fireproof, with cement as well as terra-cotta flooring; ownership composed of a syndicate of this city's capitalists; arch., Henry Dagit, 706 Walnut St.

Springfield, Mass. — *Sanford St.*, four-st'y brick storage-building; \$8,000; own., A. C. Hunt & Co.

St. Louis, Mo. — One-st'y warehouse, w s Tower Grove, bet. McKee and R. R. Tracks; \$3,000; own. and bld., Liggett & Meyers Tobacco Co.

#### MISCELLANEOUS.

Philadelphia, Pa. — *Monroe St.*, No. 319, three-st'y brick tailor work-shop, 18' x 60', with an ell wing, 18' x 37'; con., James W. Baird, 1134 South Broad St.

*Allegheny Ave.*, n e cor. 22d St., one-st'y brick freight-depot, 25' x 75'; own., Philadelphia & Reading R. R. Co., Market & 12th Sts.; con., A. M. Greene, 408 West Chelton Ave., Germantown.

*Girard Ave and Twenty-second St.*, two-st'y brick laundry, 23' x 61'; own., House of Refuge, Girard Ave. and 22d St.

St. Louis, Mo. — Boiler-house, e s Manchester St., bet. Papin and Sarpy Sts.; \$3,500; own. and bld., St. Louis D. B. & Prov. Co.

the man from the sheer multiplication of monuments of one kind and similarly placed. It would be better with this monument, which is one of exceptional importance both as to subject and artistic dimension, that it should mark a new departure in the selection and utilizing of sites for our public statues.—*Frank Sewall in the Washington Post.*

#### COMPETITIVE MODELS FOR THE STATUE TO GENERAL SHERMAN.

ON March 22, 1895, a circular was sent out stating that a committee of the Society of the Army of the Tennessee, the President of the same Society, the Secretary of War and the Lieutenant-General of the Army had authority to erect and supervise the construction of an equestrian statue of General W. T. Sherman, in Washington, D. C.

In answer to requests for more detailed information, the matter was referred to the National Sculpture Society, under whose advice rules governing the competition were drawn up, the main points of which were that the cost of the completed monument was limited to \$90,000, and that all designs which exceeded that amount in the opinion of experts, contractors in stone and bronze, were to be rejected. All models were to be rendered in plaster to a uniform scale of one inch to one foot. "A Committee of the National Sculpture Society will pass upon the artistic character of the models."

Consequently, Messrs. Augustus St. Gaudens, Bruce Price, J. Q. A. Ward and D. C. French met in Washington in the capacity of judges on January 15.

Unfortunately, the Committee of the Society of the Army of Tennessee, composed of old army men, reserved the right to reject any and all designs. It seems an error that the Sculpture Society did not draw up the scheme making the action of the expert committee final.

The appointment of an expert commission to decide on the merits of the monuments only emphasises the want of such a commission to determine upon a site before such groups are modelled. Only by a knowledge of the location can sculptors and architects model and design their work intelligently, making the statuary and its architectural base in harmony with its surroundings and a fitting complement, instead of a disturbing element, in the locality in which it is placed.

Two of the most notable sites under discussion were Lafayette Square, north of the White House, and Franklin Square, between Thirteenth and Fourteenth, I and K Streets. These are two of the old squares of the city filled with fine old trees, many of which it would take a hundred years to replace. Neither of these squares is so located that a statue would form the end of a long vista, one of the few positions in which the ordinary equestrian statue is effective. The necessary destruction of many of the large trees would be a piece of vandalism, an outrage on the community, while the hiding of a piece of monumental equestrian statuary by such trees as remained would be a piece of foolishness. Many Washingtonians are acquiring a reverence for some of the older work done in the earlier days of the city. There is a feeling of this kind for the landscape work of A. J. Downing, who planned Lafayette Square.

I understand that the Army Committee, and strange to say, upon the advice of some of the sculptors, have fixed upon the southwest corner of Lafayette Square, yet not one of the models in the

competition seems to be in any way suitable for such a position; any one would destroy a quarter of the park. Some would absorb the whole of it.

The monument to Lafayette has been placed on the southeast corner of this Square, where it interferes with one of the principal walks. Yet while this group is more delicate and in better keeping with its surroundings, the location is so unfortunate that the group can only be seen to advantage from the middle of Pennsylvania Avenue, where one has to take his chance among the many vehicles constantly passing. The location of the Sherman statue on the opposite corner would share the same disadvantages, emphasized by its increased size, and would, moreover, conflict with the Jackson statue in the centre of the Square.

The question of the location of this statue should be submitted to a commission, consisting of a landscape architect, architect and sculptor, appointed or nominated by their respective societies, who should be able to appreciate all the points at issue.

When we consider the number of solitary horsemen scattered through the city, although there is a variety in detail and pose, it produces a feeling of dreary monotony. It is rare, if at all, that any of the existing groups impresses one as a work of art.

The beauty of an equestrian statue on a high pedestal has always appeared to me a debatable one, except when viewed from a distant point, where the finer details and expression are lost and only the lines of the mass can be depended on to produce the pleasurable impression desired. All views from a near standpoint give the horse and rider a distortion because of the unnatural position above your head, which is, to say the least, not pleasing. For this reason the low pedestal is the best for all ordinary positions, because the visitor will usually contemplate them from a distance of twenty to fifty feet.

When we think of the money that has been spent on such statuary, and the grand things that might have been done—and may yet be obtained by a properly organized committee to direct them, we can only hope that Congress will sooner or later appoint a permanent art commission.

Let us imagine these commemorative statues massed along such a boulevard as Washington and L'Enfant contemplated in the original scheme of the city, with the public buildings as their background. Not, as in this case, repetitions of equestrian statues mounted on pedestals, but so grouped and mounted as to form a magnificent whole in connection with the buildings and grounds. This could only be the case if the whole system, buildings, grounds and statuary had been created under a properly constituted art commission.

There are numerous sites where statuary designed for the location would be properly displayed and enhance the beauty of the buildings and grounds in which they were placed. The plaza and terraces of the Capitol have been mentioned and are to be commended for this particular monument,

while the sunken terrace in front of either the War, State and Navy Department or Treasury Building are peculiarly good sites, for, in either, the horse and rider would be more nearly on a level with the eye of the observer and the base could harmonize in material (I should be sorry to have it harmonize with the first mentioned building in architectural treatment) with the building in the rear.

The first thought in making a comparison between these models is, Where is the statue to be located? Some are designed with a principal front, and should necessarily be placed where the rear would be rarely seen. Several of the groups cover a large area, and would



Model by J. Massey Rhind, Sculptor. K. Dahlen Tange, Architect.

require very large grounds and surroundings to properly enhance and display their merits. The large majority of the models, however, show mere variations of the conventional base for equestrian statues, evidently designed with the idea that the statue could be placed in any one of the numerous small squares or circles of the city, thus to a limited extent making it one of the stock monuments—a very sensible thing for the designers to do under the conditions of the competition, but it is unfortunate for the advancement of art not to have the monument as a part of and perfecting a grander scheme than the single work of art.

The statues may readily be grouped into classes, one of which consists of those with pedestal, terrace and balustrade or parapet walls. In this class are the ones by R. H. Perry, sculptor, and E. P. Casey, architect, L. Multigrade, sculptor, P. W. Bartlett, sculptor, H. J. Ellicott, sculptor, W. B. Gray, architect, H. K. Bush-Brown, sculptor and Babb, Cook & Willard, architects, Chas. H. Niehaus, sculptor. All of this class, except those of Ellicott and Niehaus, could only be placed by obliterating any of the ordinary squares of the city.

Perry's groups on four sides of his monument are spirited, too spirited for repose, and produce breaks in the whole outline of the composition which are not agreeable. Sherman is in the pose and on the horse of a Roman emperor. How foreign to the life of the man! The posts at the terrace entrance are very coarse, and detract from the whole composition.

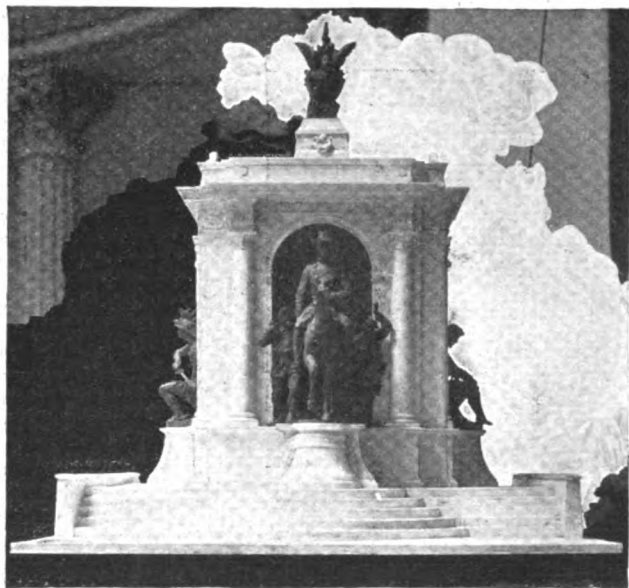
Bartlett's pedestal rises from a sunken terrace with four entrances to the lower level, two of which are flanked by excellently bold architectural lions and two by eagles in repose with unequal drooping wings—very unhappy and miserable looking birds, possibly natural, but very disagreeable to contemplate and in sharp contrast with the impression produced by the lions. The horseman and general effect is good, with the exception of the height, which is excessive, although it rises from a level below the normal grade. Still I think it is the most effective of this class.

C. H. Niehaus, sculptor, shows a terrace with low wall surrounding the rear of the statue, very similar to one of the designs for the statue of Kaiser Wilhelm in Berlin, in fact general opinion declares it to be too close an adaptation. It shows skill in execution and adaptation. His other model, which does not belong to this class, is a similar adaptation of the Colleoni statue in Venice. Both would require exceptional sites. The necessity of reproducing work of the old country too closely is doubtful and not to be commended, unless we are willing to sink our own individuality.

Another class is distinguished by groups of statuary more or less elaborate, distributed around the pedestal of the statue. By far the larger number of monuments belong to this class and in it must be included those by the following sculptors: George H. Bissell, Alfred Luzi, J. Massey Rhind, Carl Rohl-Smith, C. H. Niehaus (his second design), H. K. Bush-Brown (2d design).

Bissell has a higher pedestal enriched with a band of figures in full relief standing upon the principal die. The figures are good, and close enough to the pedestal not to clash with the general effect, but at the same time form the principal feature of the monument and leave Sherman high and lonely.

Mr. J. Massey Rhind (K. Dahlen Tangen, architect) presented quite an effective group. The figures are so placed around the

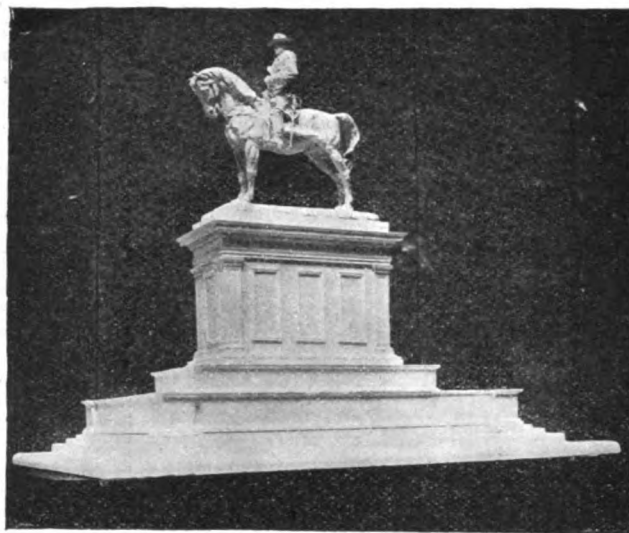


Model by Louis Amateis, Sculptor.

pedestal as to harmonize with the base and produce a pleasing whole. The panels with figures in high relief are effective, and the horse and rider in repose are good. The main figure is too high, except for a distant view, and the architectural wings to the lower portion of the base appear to have been put on as an afterthought, without proper connection with the other architectural features.

Carl Rohl-Smith in his model has the advantage of one of the simplest compositions; the base is without architectural pretension, yet it is well proportioned and graceful in itself and in connection with its horse and rider above. The horse and rider are simple and unaffected, as was the real man. The pedestal has the advantage of being low.

Louis Amateis made an effort in the right direction. The horse, rider and other figures are near the level of the eye and the rear



Model by W. O. Partridge, Sculptor.

of the statue is cut off from view by an architectural background; unfortunately the architectural combination of arch, horse and figure is badly proportioned in connection each with the other as well as separately, and it is only for the idea that this monument is to be commended.

Wm. Ordway Partridge submitted two models with simple architectural bases. If they should need additional ornamentation it was intended to put it on so as to harmonize with the locality selected. The one in which the horse stands in repose is a simple and dignified mass, well-proportioned, suitable for quite a variety of sites. The horse stands firmly planted on the pedestal and nearer the level of the eye than any of the others, except the one by Amateis. There is a dignity, repose and simplicity about this monument that makes it a very satisfactory composition.

The Committee of the Army of the Tennessee with the Secretary of War, Saturday morning, January 18, selected for further elaboration, the four models by P. W. Bartlett, Paris; Carl Rohl-Smith, Chicago; C. H. Niehaus, New York, (the model showing an exedra in rear); and J. Massey Rhind, New York. They are to enter a second competition, elaborating their schemes, and make models to a scale of two inches to a foot. One to receive the commission, the other three to receive \$1,000 each and \$250 for labor for additional modelling.

H. K. Bush-Brown received the fifth award of \$1,000.

The full judgment of the expert committee was not made public—but the Army Commission states that it coincided with the expert committee except in one instance, where they selected a group contrary to the expert committee's opinion.

The experts assert that the exhibition was one of the greatest artistic merit, and highly creditable to American artists.

The Army Committee with the Secretary of War will select a site during this week.

In this way the competitors will be able to a certain extent, to modify their scheme to suit the surroundings. GLENN BROWN.



#### THE PHILADELPHIA T-SQUARE CLUB.

THE January meeting of the T-Square Club was held on the 15th and the competition for an "Ingle Nook" was contested with earnestness by many members. The mentions were awarded to Messrs. D. K. Boyd, First; Lloyd Titus, Second; and Albert Kelsey, Third. The rendering of Mr. Boyd's design was decidedly influenced by Howard Pyle's quaintness, certainly deserving the interest which was bestowed upon it. Mr. Lloyd Titus submitted two designs which were especially well worked out. His design receiving Second Mention was, without doubt, the most skillful piece of coloring submitted for some time.

Mr. Kelsey's scheme was snug and well planned, but much criticised on account of its hooded entrance.



Mr. Titus's second design, though beautifully rendered, was not as strong in architectural design as his mention drawing.

The other competitors were Messrs. Bassett, Lacey, Oelschalger, Trout, Molitor and one unclaimed.

Mr. Caldwell reported for the Library Committee, stating that several plans had been suggested and would be presented to the Club for their discussion at the next meeting. Mr. Perot introduced a motion to the effect that a committee of five be appointed by the Chair to consider the advisability of the Club erecting a suitable memorial to our late President, John Stewardson. Mr. Kelsey spoke for the John Stewardson Memorial Committee, explaining their wish to establish a travelling-scholarship in connection with the University of Pennsylvania, to bear Mr. Stewardson's name, which, once established, would annually send a student abroad, and be a perpetual tribute to his memory.

The lecture by Mr. F. M. Mann on January 22d — "The Development of Gothic Architecture" — evinced careful study and thorough knowledge of his subject.

Mr. Mann explained how the Roman basilica had given the form for the Christian church and on through ages, how the plan in the form of the Latin cross had been developed, showing the natural and structural reasons for the vault and flying-buttress as exhibited in the many beautiful cathedrals of France.

Mr. Cope's lecture on February 5th has been anticipated for some time. The subject — "Spanish Architecture" — will be especially interesting, as it will have a bearing on our next competition; also, because he has but so recently returned from an extensive trip through that country. ADIN B. LACEY, Secretary.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE PHOENIX BUILDING, SPRINGFIELD, MASS. MR. KMORY A. ELLSWORTH, ARCHITECT, HOLYOKE, MASS.

[Gelatine Print issued with the International and Imperial Editions only.]

A MONUMENT AT FOREST HILLS CEMETERY, ROXBURY, MASS. MESSRS. DWIGHT & CHANDLER, ARCHITECTS, BOSTON, MASS.

DESIGN FOR TOWN-HALL AT EAST ORANGE, N. J. MR. JAMES D. MATTHEWS, ARCHITECT, EAST ORANGE, N. J.

A GROUP OF BASEMENT HOUSES, NEW YORK, N. Y. MR. JAMES BROWN LORD, ARCHITECT, NEW YORK, N. Y.

ACCEPTED DESIGN FOR CITY-HALL, STATION AND JAIL, COHOES, N. Y. MESSRS. J. C. HOLLAND & CO., ARCHITECTS, TOPEKA, KAS.

The city-hall will cost \$65,000 and will be built of stone, as it was afterwards changed from brick to stone. There were twenty-eight designs submitted in the competition.

BUSINESS PREMISES FOR A. N. MAYO, ESQ., SPRINGFIELD, MASS. MESSRS. GARDNER, PYNE & GARDNER, ARCHITECTS, SPRINGFIELD, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

PALAZZO FARNESE, CAPRAROLA, ITALY: DECORATION OF VAULTED CEILING BELOW THE HALL OF THE AURORA.

EXAMPLES OF LOUIS XVI STYLE.

A GROUP OF CHAIRS.

A GROUP OF TOWERS.

[Additional Illustrations in the International Edition.]

SAINTE CLAIRE CLUB-HOUSE, SAN JOSÉ, CAL. MR. A. PAGE BROWN, ARCHITECT, SAN FRANCISCO, CAL.

[Gelatine Print.]

PARLOR IN SAME CLUB-HOUSE.

[Gelatine Print.]

ENTRANCE-HALL IN SAME CLUB-HOUSE.

[Gelatine Print.]

HÔTEL D'ALLUYE, BLOIS, FRANCE; RESTORATION BY M. LAFARGUE, ARCHITECT.

This plate is copied from *La Construction Moderne*.

INTERIOR OF THE SCHLOSSKIRCHE, WITTENBERG, SAXONY.

This plate is copied from the *Zeitschrift für Bauwesen*.

MONUMENT TO MEISSONIER, PARIS, FRANCE. M. MERCIÉ, SCULPTOR.

This plate, copied from the *Builder*, shows the marble monument which has been set up recently in the Jardin de l'Infante, that part of the grounds of the Louvre which is opposite the Pont des Arts. The statue is founded on the artist's well-known portrait of himself.

ST. MARY'S CHURCH, BURFORD, ENG., AS RESTORED BY MR. ASTON WEBB, ARCHITECT.

No more careful and excellent restoration of an English country church has, to our knowledge, been carried out recently than the little church of St. Mary at Burford-by-Tenbury. A building like this, as it now stands, is a fair argument against those who would prefer to see some of our old structures tumbling gradually to ruin, and with often little of the ancient structures surviving the ravages of "churchwarden architecture." Though this is practically a new church, the solidity and beauty of the work have been obtained by no loss of any ancient interest, whilst the whole design, inside and out, reflects the charm of an old English country church.

There are certain features about the building which are quite out of the common. First of these we may name the solidly proportioned tower with its telling sky-line and richly decorated belfry story.

This church shows some traces of Norman work in the chancel, and of sixteenth-century work in the base of the tower, all of which has been carefully retained, but with these exceptions there is little of antiquarian interest in the church itself beyond the very fine and curious collection of monuments to the "Cressewayl" family. These are left absolutely untouched, and include a painted wooden altar tomb in the centre of the chancel, and a very curious painted oak tryptich, on the north side of the chancel, to one of the Cressewalls—a giant by report. The chancel had a common carpenter's roof over it made up largely of old pew ends. The tower had been encased in brickwork and cemented over, the tracery removed from the windows, and the floor raised several feet. It was in 1887 that the Honorable Miss Rushout decided to restore the church throughout at her sole cost as a memorial to her brother, the late Lord Northwich. The principal work to the exterior was the refacing of the tower with stone executed in the warm red Bromsgrove sandstone, rebuilding the parapets, and adding buttresses where necessary to support the walls, which in many cases had gone out a great deal through the thrust of a trussed rafter, even without ties—and refilling the window openings with tracery.

This plate is copied from the *British Architect*.

CORRIDOR IN THE HOUSE OF THE LATE LORD FREDERIC LEIGHTON, HOLLAND PARK ROAD, LONDON, ENG. PROF. GEORGE AITCHISON, ARCHITECT.

CHURCH OF ST. COLOMBA, MARYLAND POINT, EAST, LONDON, ENG. MR. E. P. WARREN, ARCHITECT.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

ELEVATOR SHAFTS.

CHICAGO, ILL., January 25, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your issue of the 18th inst., I notice that you gave attention to the query made by me in a former communication and thank you for having done so. My own views have coincided with those you have expressed, especially in consideration of the fact that most fires are merely incipient and may be prevented from spreading by even wooden partitions, but I am with a minority. The first few minutes of a fire are invaluable from the standpoint of extinction. Wood sheathed elevators also reduce the chances of smoke damage and, in case automatic sprinklers are installed, prevent water damage on floors not burning, by preventing the rise of heat to those floors.

Trusting that your paragraph may bring forth a more detailed discussion of the matter, which is of more importance than the laity would suspect, and thanking you again, I am,

Yours truly, S. H. LOCKETT.

## A MISTAKEN ASCRIPTION.

MILWAUKEE, WIS., January 27, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,— It is very nice of you to have published such an excellent colored plate with our names attached to it. We appreciate the motive, but the fact of the case is that we did not do the building, which is by Messrs. Moller & Ehlers.

Yours truly, GEO. B. FERRY &amp; CLAS.

[We offer sincere apologies for the blunder. Although we have a valid excuse for its making, it seems unnecessary to offer it in public. We trust that each subscriber will, for the authors' sake, make the proper correction on the prints in question. — EDS. AMERICAN ARCHITECT.]



BOSTON, MASS.— *Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895:* at the Jordan Art Gallery, 450 Washington St.

*Fifty-third Exhibition, Oil-paintings and Sculpture:* at the Boston Art Club, January 13 to February 15.

*Pictures by Childe Hassam:* at the St. Botolph Club, January 27 to February 15.

*Photographic Views by Walter G. Chase, and Flash-light Studies by Miss Bertha Lothrop:* at the Boston Camera Club, 50 Bromfield St., February 5 to 15.

BRIDGEPORT, CONN.— *Second Annual Exhibition of Pictures:* at the Public Library, January 25 to March 15.

CHICAGO, ILL.— *Works by Gustave Doré:* January 21 to March 22, *Swedish Paintings:* February 4 to March 1, at the Art Institute.

CINCINNATI, O.— *Paintings of the "Glasgow School":* at the Art Museum, January 5 to February 2.

CLEVELAND, O.— *Joint Exhibition of the Cleveland Art Association and the Cleveland Architectural Club:* at the Garfield Building, opens February 10.

NEW YORK, N. Y.— *Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Exhibition of Japanese Paintings and Color Prints:* at the Fine-Arts Building, 215 West 57th St., until February 5.

*Derbyshire Pictures by Robert W. Van Boskerck:* at Knoedler's Gallery, 34th St. and Fifth Ave., January 18 to February 14.

*Drawings and Water-colors by George Wharton Edwards:* at Keppel's Gallery, 20 East 16th St., January 27 to February 8.

*Twenty-ninth Annual Exhibition of the American Water-color Society:* at the National Academy of Design, February 3 to 29.

PHILADELPHIA, PA.— *Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts:* opens December 23, closes February 22. The Architectural Section of the Exhibition closes February 1.

SPRINGFIELD, MASS.— *Nineteenth Annual Exhibition of Paintings:* at James D. Gill's Gallery, opened January 31.



PUBLIC BATHS IN NEW YORK.— Dr. W. H. Tolman, Secretary of the Mayor's Committee on Public Baths and Comfort Stations, recently read before the Purify Alliance a paper on the object for which the committee was appointed and its relations to public morals. Among other things Dr. Tolman said: "American cities are only now taking up the matter of public baths. Continental cities are centuries in advance of us and were the public baths in them closed, I believe a revolution would follow. East of the Bowery and south of Fourteenth Street there is a population of over 600,000. The Tenement-house Committee of 1894 investigated the bathing question among 255,000 of these and found that of this number only 306 had access to bath-rooms in the houses in which they live. This is an indisputable fact and can be sworn to safely. The only places where in the above district the tenants if they want free, or practically so, baths, can get them, is at the Baron de Hirsch baths, No. 9 Centre Market Place, the Demilt Dispensary, Twenty-third Street and Second Avenue, the Cathedral Mission in Stanton Street, and the Riverside Association, West Sixty-fifth Street. With the exception of the floating-baths in summer there is not a single public bath provided for New York. The present committee has presented plans for a public bath in the vicinity of Tompkins Square, to cost \$150,000, which the Board of Health has accepted. This bath will accommodate 2,500 daily. It is the first of a series of seven to be located in the congested parts of the city."

Apropos of the same subject the New York Evening Post says: "The report for December last of the People's Baths, No. 9 Centre Market Place, under the care of the New York Association for Improving the Condition of the Poor, is an evidence of the popular demand and willingness to pay for baths. Out of the total of 4,688 bathers, 3,751 were

men, 458 women, and 474 children; 4,375 paid for their baths, 234 were free, and 74 presented tickets. The price of the bath is five cents, entitling the bather to a compartment for twenty minutes, with the use of soap and towels. Tickets, twenty for \$1, are on sale at the office of the association, No. 105 East Twenty-second Street, and are used by people desirous of bestowing charity in the form of a bath. There was an increase of 280 bathers over the corresponding period, the month of December, 1894. In view of these facts, the Association asserts, a strong argument is presented for the erection and maintenance of other public baths, under the care of the municipality, the authority for which was granted by law passed in April, 1894.

BARTHOLOME'S MONUMENT AUX MORTS.— According to the scheme prepared by M. Formigé, the architect, for the installation at Père Lachaise Cemetery of M. Bartholomé's great sculptural work, the "Monument aux Morts," it will be placed with its back against a building which will serve as a place for provisional interments, and which will at the same time protect the sculpture from any movement of the ground, which is always to be reckoned on as a possibility in the slippery clay soil of Père Lachaise. The building, as a backing to the work, will also serve to give greater breadth and mass to the effect of the sculptural work, which will form an *avant-corps* in the composition, flanked on each side by the lateral portions of the building, slightly recessed, and decorated with sculptured doors giving access to the crypt formed in the building. In addition to this, in order to give greater elevation to the monument, the central alley of the cemetery at this point will be levelled so as not to follow the main slope of the ground. The cost of the work will be about 67,000 francs. The new construction will thus be of practical use, besides forming a magnificent ornament to the cemetery. — *The Builder*.

MONEY NEEDED FOR USE AT POMPEII.— Is there no "loyal European" — to adopt Talleyrand's phrase — who is rich enough and sufficiently public-spirited to furnish substantial aid to the excavations at Pompeii? The operations which have now been in progress for nearly a century and a half, contributing so largely to our knowledge of the public and private life of the Roman people, are interesting not to the Italian nation only, but to the whole world; yet Italy bears the cost, and she has but little money just now to spare for objects that are not of prime necessity. Mr. Fitzgerald Marriott tells us that all the Italian Government is now contributing to this object is about 8,000 lire — equal to £304 a year — and that the receipts at the gates of the ancient city do not go to the place itself, but the central administration in Rome, who distribute it to different centres throughout the kingdom, where similar excavations are going on. The latest of the houses discovered in buried Pompeii is as yet only partially unearthed; but the clearings have already brought to light a remarkable number of painted fresco panels and pictures, together with friezes ornamented with beautiful designs. The most noteworthy of the art treasures revealed are three pictures, each more than three feet in height by only a trifle less in breadth. One represents Jove watching in astonishment the infant Hercules strangling the serpents. Alcmena looks on from behind the throne. The subject of another is Amphion and Zethus binding Dirce to the bull, and that of the third is the death of Pentheus, the young king of Thebes, slain by his mother, sisters and aunt during their Bacchanalian orgies, and in revenge for his resisting the introduction of the rites of Bacchus into his kingdom. The coloring of the latter picture is said to be very delicate. To the effective massing of the figures and the striking vigor of the composition in general, photographic reproductions bear testimony. — *London Daily News*.

THE GREAT ROADS OF PERU.— Perhaps the earliest road on record is that mentioned by Herodotus as having been constructed by Cheops, the Egyptian King, in order that stones might be dragged along it for his pyramid. In the opinion of the Greek traveller the work of making the road was as great as that of building the pyramid, for it took ten years to construct, and it was composed of polished stones with figures carved on them. But this does not compare in magnitude with the highways constructed by the Peruvians, while mediæval Europe was still in a state of semi-barbarous disorganization. The two principal roads in Peru ran from Quito in the north, to Cuzco, the capital, the one along the sandy and level strip of coast, the other along the plateau of the Andes, a region of unparalleled engineering difficulty. The length of the second has been estimated at from 1,500 to 2,000 miles. It crossed sierras buried in snow; bridged ravines with walls of solid masonry; mounted and descended precipices by staircases hewn in the solid rock; and ran in interminable galleries along the sides of intractable mountains. When rivers had to be crossed, bridges were made with ropes of stout, pliant osier, twisted to the thickness of a man's body, and stretched over the stream sometimes for a distance of two hundred feet. These cables swung side by side, and fastened with planks so as to form a footway, were drawn through holes in enormous buttresses of stone specially constructed on each bank, and were secured firmly at each end to heavy beams of timber. A railing of similar osier material gave the passenger confidence as he crossed the oscillating bridge, that sank dangerously in the middle and mounted rapidly at the sides. The great highway was twenty feet wide, and was built with flags of freestone covered with bituminous cement. It was measured out by posts set up at every league; caravansaries and magazines were stationed at convenient distances for the Peruvian soldiers on their military expeditions; and a regular postal service had been organized by which highly-trained runners, relieved every five miles, could convey messages a distance of two hundred miles in the twenty-four hours. The roads were kept in beautiful order, the inhabitants of a district being responsible for that portion of the highway which traversed their land. At the same time should be remembered that there was no wheel traffic to cut up the level surface of the hard pavement. There is considerable irony in the fact that it was not till the Spaniards forcibly introduced their so-called civilization into Peru that the famous roads began to fall into disrepair. — *London Standard*.

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FEBRUARY 8, 1896.

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ONE of the most necessary features of the building-laws of the future will be a provision by which existing buildings must, within a reasonable time, be made to conform to them. The proposed building ordinance for Glasgow gives seven years as the limit, within which all existing buildings must be brought into compliance with the new regulations; and, if the regulations are drawn with this in view, there is no real hardship in enforcing them. Under the conditions at present prevailing in our cities, while the building statutes grow more rigorous, not to say oppressive, every day they leave behind them, so to speak, a vast number of structures, such as could not be built under modern regulation, but which the law does not require to be removed, and which continue indefinitely to produce their evil effects upon the people who occupy them, and to endanger those who live or own property near them. Some thirteen years ago, a law was passed in New York, absolutely forbidding the erection of what were then known as “rear tenements.” These structures were miserable hives, built, generally, in the back yard of what had been a respectable dwelling, now converted into tenements. As back yards in New York are inaccessible, except through the house to which they belong, the only approach to these back tenements was through the hallway of the front tenement. As New York house-lots are only one hundred feet deep, it may be imagined that, where two houses are built on the same lot, the one in the rear has very little light and air, and, long ago, they had an evil name for the disease and filth by which they were generally characterized.

NOW, although the law will not hear of the erection of new back tenements, and even front tenements must be so planned and built as to be tolerably pleasant and wholesome habitations, little or nothing has been done, or can be done, to compel the removal or remodelling of the back tenements built by the last generation, and they still remain, and are still crowded with the poorest of the city population. It is estimated that fifty thousand people live in such buildings, and suffer from the same influences which have brought physical pain and misery on their predecessors ever since the houses were built. It is true that much has been done, by judicious statutes and rigorous inspection, to improve the condition, even of tenement-houses which are radically bad in situation and arrangement; but no legislation or inspection can bring sunshine or fresh air into the windows of a house

surrounded on all sides by other buildings, at a distance of a few feet. The city physicians testify to the unwholesomeness of these dwellings, but, so long as they exist, they will be occupied. For many people, especially in New York, economy in house-rent is the first necessity. To a man who, like myriads in the city, has to support a family on an income averaging a dollar a day, the difference in rent between the front and rear tenement rooms may involve the question of sufficient or insufficient food for his children; or, perhaps, by living in a rear tenement he can provide the little ones with shoes, which they would have to go without if they occupied the pleasanter, but more expensive, rooms in a front tenement. Poor people love their children quite as much as rich ones do; and, as shoes and stockings are a tangible blessing, while the hygienic disadvantages of privation of light and air are not very familiar to the uneducated, the choice is soon made; and it is only later, when the doctor who attends the daughter in consumption, or the baby in the collapse of cholera infantum, expresses his mind on the subject, that the parents realize the influence of their surroundings. For this reason, it is certainly the duty of people who understand such things to try to guard their poorer fellow-citizens against avoidable unwholesome influences. Sacred as are the rights of property, the rights of citizens are more sacred still; and no one is entitled to maintain on his premises, and let to innocent tenants, even though these voluntarily occupy it, a building which will probably cause some of them to die of consumption or diphtheria, and from which infection may be spread among the public.

THE Superintendent of the New York Department of Buildings has devised a plan for remedying any corruption that may exist among the inspectors that belong to his Department. Not long ago, some evidence was given, showing that certain inspectors had been bribed, or had even demanded blackmail from builders, as a consideration for winking at violations of the building-laws; and Mr. Constable is determined to put a stop to transactions of the sort. With this view, he has appointed twelve “special inspectors,” whose duty it is to wander about through the forty-eight districts under the charge of the regular inspectors, and watch for evidence of bribery, blackmailing, connivance at illegal acts, or other violations of duty on the part of the regular inspectors. The latter are not too well pleased with the new system, under which one of them, on the report of a special inspector, has already been summarily discharged, and complain that they may be made to suffer for the fault of builders, who sometimes offer money to perfectly honest inspectors. If the fact of their having made such an offer is reported to the Superintendent, he would naturally infer that the inspector took the bribe, and would act accordingly, thereby injuring an honest man. The natural answer to this is that a builder would not be likely to compromise his reputation, by offering money to an inspector who was known to be of Spartan integrity; and the offer of such bribes is always considered as an indication, if not *prima-facie* evidence, that the person to whom they are tendered is not averse to receiving them.

IT was while the last convention was being held at St. Louis, in October, that news was received that terrible injuries had befallen Mr. A. Page Brown of San Francisco, due to his being precipitated from a bridge to the river-bed, together with the wagon and new horse he was trying. Thanks to his youth and good constitution, in spite of fractured legs, arm and skull, the unfortunate architect clung stoutly to life and there seemed promise that he would eventually recover: in fact, when we received from him a few weeks ago the negatives of the Ste. Claire Club-house, recently published in this journal, we took it to be a token that he was again a well man. It appears, however, that he never really recovered full possession of his senses before his death on January 21. Born October 19, 1859, Mr. Brown received his education at Cornell University, and after three years in the office of McKim, Mead & White and two years of study and travel in Europe, began active practice in New York, in 1885. While established there, he designed several buildings for Princeton College, the most important one being the Art Museum. Family reasons led him to migrate to San Francisco, where he very shortly

acquired the position of one of the leading and most progressive architects in the city. During the seven or eight years of his residence there he built, amongst other notable structures, the eleven-story Crocker Building, which cost a million and a quarter of dollars, the Donahue Office-building, Trinity Church, the Old Peoples' Home and many private houses. The building through which his name became known to the greatest number of people was the California State Building at the World's Fair, a far more successful piece of work than any of the buildings which he subsequently built for the Mid-winter Fair at San Francisco. He was a thorough believer in the possibility of adapting the style of the Spanish Missions to modern buildings, and a large part of his later work was distinctly colored with traces of the influence this Spanish American architecture had acquired over him.

**L**ORD LEIGHTON, formerly Sir Frederic Leighton, President of the Royal Academy of Arts of Great Britain, and a painter of great and deserved reputation, died suddenly a few days ago, just after he had received the highest honor ever bestowed upon an artist in England, in being raised to the peerage, under the title of Baron Leighton. Lord Leighton was born in Scarborough, about seventy years ago. As a boy he showed marked talent, and, rather against the inclination of his parents, was at last allowed to go to Rome, where he studied drawing and painting under Filippo Meli. From Rome he went to Berlin, entering the Royal Academy there; and afterwards studied at Frankfort, with occasional visits to Italy. In 1848, he went to Brussels, and studied for a time there and in Paris, but returned again to Frankfort, where he worked diligently under Steinle, until he went to Rome, in 1852. He remained in Italy six years, painting there some pictures of note, and finally returned to England, where he joined with enthusiasm the Pre-Raphaelite movement. He was, however, too catholic in his knowledge and sympathies to tie himself long to the superstitions which the Pre-Raphaelites elevated into articles of faith, and for some years, as is the case with most great artists, he worked in various ways, over many different subjects, painting Spanish, Moorish and Oriental scenes, but gradually inclining to the classical subjects in which he was to win his highest fame. In 1878, he was elected President of the Royal Academy, and, as is usual, was knighted soon afterward. His elevation to the lesser nobility, as a baronet, followed in due course, and, within the last few weeks, he was still further advanced in rank. His popularity in general society undoubtedly aided this advancement. Dignified and handsome, as well as sincerely amiable, he made friends everywhere, not only among laymen, but among artists, who regarded him with admiration and affection, while he, in return, did much to encourage and assist his poorer brethren. He was for many years Colonel of the Artists' Volunteer Corps, and was a member of a great number of foreign artistic societies.

**T**HE archæologist, Fiorelli, who died in Rome a few days ago, was a Neapolitan by birth, and first distinguished himself in his profession as inspector of the excavations at Pompeii. He was afterwards made director of all excavations in Southern Italy, and appointed Professor of Archæology in the University of Naples; and, later, was summoned to Rome, as Director-General of all the museums of the kingdom. He wrote many works on Italian antiquities, and his name is familiar to all students.

**T**HE Medical Society of the State of New York has adopted, and referred to its Committee on Legislation, a report, presented by a special committee, on which was imposed last year the duty of presenting a feasible plan, by which the present methods of introducing medical expert testimony might be improved. The special committee, after consulting with physicians and lawyers, recommended, in its report, the passage of a law providing for the appointment of medical experts by the courts, in such number as might seem to the court advisable; such experts to act as advisers to the Court; to be selected from physicians of repute in the branch of medical science with which the case might be concerned; to be allowed free access to all the other evidence; to submit their evidence in a written report; and to be exempt from cross-examination on any matter, except the facts and opinions embraced in their report. It is much to be hoped that the physicians, who, in New York, where the professional standard is kept up by statute regulations, are an influential body, may be successful in having their recommendations adopted.

**I**T will be remembered that the last New York Legislature passed an order, authorizing the comptroller of the City of New York to pay the prizes promised to the winners of the competition for the new City-hall. The Municipal Building Commission met the other day for the purpose of carrying out the purpose contemplated in the order, but encountered an unexpected difficulty. After the selection of the six best designs by the Board of Experts, some three years ago, and the subsequent passage of the statute forbidding the erection of the building in the City-hall Park, the plans were stored away in an unoccupied room in one of the city buildings. As no appropriation had been made for paying a man to look after them, no one looked after them. The six selected plans were put among the rest, and the whole collection, numbering one hundred and thirty-four sets, was piled up together. Moreover, the sealed envelopes, containing the names of the authors of the designs, were piled up somewhere else, but no one now knows where. As not even the experts opened the envelopes, no one can say who were the authors of the six selected designs, even if they could be separated again from the mass of the collection, and there may be nothing to do but advertise for claimants for the ciphers attached to the designs.

**A**MERICAN architects will feel themselves pleasantly complimented on learning that a book is to be published in Germany, expressly devoted to American architecture. As the *Deutsche Bauzeitung* says, in speaking of the work, the recent architectural achievements of the North Americans, by their peculiar characteristics, have become the object of general and increasing interest, and it is felt in Germany to be desirable to possess some publication which will give a more complete and intelligent account of them than can be obtained from periodical publications. With the view of providing for this want, Herr Max Junghäudel, of Berlin, who is already known in the profession by his studies of Spanish and Egyptian art, is now in America, making the necessary studies; and our contemporary hopes that the profession in this country will do what it can to assist his investigations.

**M.** CHARLES LUCAS, in *La Construction Moderne*, continues his stories about famous architects by some anecdotes of Soufflot. While he flourished, Marnontel, who was a friend of the Poisson family, to which Madame de Pompadour belonged, was secretary to Madame de Pompadour's brother, the Director-General of the King's Buildings, and left in his Memoirs a brief description of the famous architect, who, as he said, "was a man of sense, prudent in conduct, and a skilful and learned architect, but his thoughts were bounded by the circle of his own compasses." Notwithstanding this opinion, Soufflot knew something outside of his business, for he published some graceful translations, in verse, from Metastasio, and is said to have composed the quatrain inscribed under one of his portraits:

"Pour maître, dans son art, il n'eut que la nature;  
Il aimait qu'aux talents on joignît la droiture,  
Plus d'un rival jaloux, qui fut son ennemi,  
S'il eût connu son cœur, eût été son ami."

**T**HAT Soufflot's description of himself in his verses was not inaccurate is shown by an incident which occurred at Auxerre. A local architect, Albespeyre, had been employed to restore the ancient church of Saint Germain, belonging to the Benedictines. As in many mediæval churches, the axis of the choir did not coincide with that of the nave. M. Albespeyre could not, of course, change the building from the foundation, so he had contrived to call attention away from the deformity by an ingenious arrangement of the vaulting ribs. Soufflot had been invited by the Benedictines to inspect the work after its completion. Of course, the irregularity at once caught his practised eye. "Good heavens, gentlemen," he exclaimed, "to what ass have you confided this work?" "To me," modestly replied Albespeyre, who was standing near; and he explained simply the condition of the old building, and what he had done to correct it. Soufflot immediately seized him affectionately by both hands. "I was the ass," said he, "not to have immediately perceived that"; and he asked Albespeyre to dine with him the next day, placed him by his side, and complimented him liberally on the ingenuity displayed in his proceeding.



GERMAN CASTLES.<sup>1</sup>—VI.

## THE PALAS, OR PALACE.



Fig. 42. Kaiserhaus, Goslar.

THE element in the castle which we come to now is the chief one, both in the eyes of historians and of artists, though least of all in those of castle owners. Few things, in fact, have surprised me so much as to have gathered from a hundred conversations on the subject, that both sellers and purchasers of castles lay very little stress on

the palace or mansion; and nothing is more common when a provincial nobleman beautifies his residence than to hear the remark that, "He will never have the outlay refunded"—that is to say, the greater or less richness of his wainscoting and parquette will not weigh much in the ultimate estimate of the estate. A handful of soil taken up between the fingers of the purchaser and his counsel and rolled; the extent of the barns, of the stables, the existence or non-existence of distilleries, creameries and sugar factories are the *gist*,—these are the things that are weighed and dip the scale of the money's-worth of a castle, not the palace—by which I must be understood, of course, as meaning the palaces belonging to those estates that the traveller sees dotting the landscape as he journeys across country, the palaces of country castles.

The palaces of town castles and of the exceptional seats which have no land belonging to them are naturally excluded from my account. These, of course, are valued as houses alone and are not merely an item in a long list, or inventory, like the residence part of a burg.

The practical value of a palace-castle which is destitute of surrounding land depends in cities upon the market-value of the site and its intrinsic costliness; but, again, in the country, as for instance on the hills of the Rhine and Elbe Rivers, intrinsic costliness counts but little. Of greater consideration in such cases is the presence of wells of good water and the easy access to a town, and supplies of food. A mean burg near such a source of supply is rated higher than a grander, but more inaccessible, pile: a reason why these latter are left one after another by their reluctant owners to crumble into decay.

I have looked over the history of many an old castle, only to find that few histories give any practical notices save the dates when they changed hands, and the names of the bargaining parties. An exception is the history of Castle Kriebstein in Saxony, which was the object of the feud that ended in the famous incident of the kidnapping of the young Saxon princes, Albert and Ernst, the princes who gave their names to the two widely-branched houses that have ruled the interior provinces of Germany and set princes on the

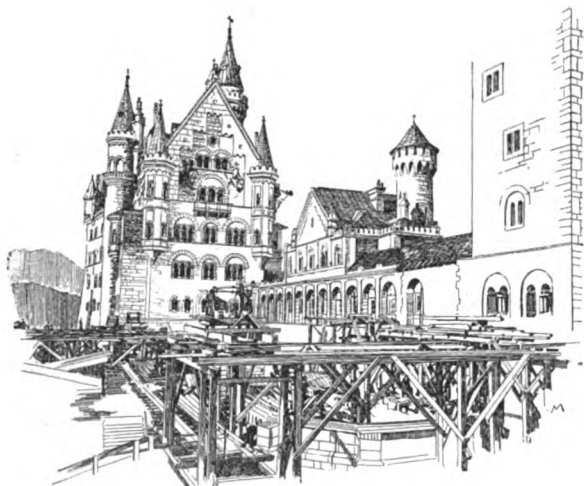


Fig. 43. New Schwanstein.

thrones of Belgium, Bulgaria, Greece and Great Britain. Kriebstein is a small hill burg that was built originally by the court-marshal of Markgraf William, Dietrich of Bernstein by name, in the years 1382 to 1404. Its *burgfried*, or keep, is capped by seven turrets, and its ancient hall stands under its original (king-post) roof

of massive oak shingles down to this day. Beneath the floor of the hall is the castle chapel, a space hewn out of the solid rock. The upper stories containing the *kemenate*, or women's portion of the palace, were constructed of wood and plaster, in nogged work, so late as up to twenty years ago, and this, in spite of the fact that the greatest architect in Saxony, Master Arnold, the builder of Albrechtsburg and the Cathedral in Meissen, worked on the castle in 1471 and

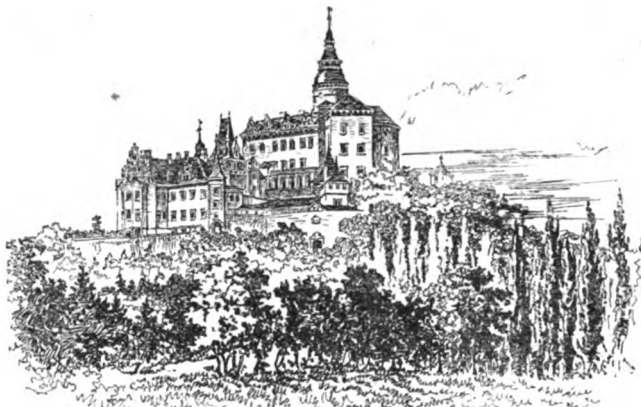


Fig. 44. Burg Friedland in Bohemia.

1472. In 1577, over a hundred years later, Kriebstein was sold to Wolf von Schönberg for 31,000 florins [a florin equals 85 cents in our day—I do not know what its estimated value was then]. But Schönberg had had it only seven years when Elector Augustus, his prince, purchased it; only to sell it again himself to a private nobleman thirteen years afterwards, the price which the Elector paid being 40,000, and that which he procured being 44,000 florins. The same year (1597) the place changed hands again, this time bringing 56,000 florins. In 1649 it went for the fourth time under the hammer. A bad time indeed, for the Thirty Years' War had completely prostrated the prosperity of the country. Kriebstein brought only 22,000 florins. In three generations the old pile saw another race come under its ancient roof, and sally in and out of its arched portals, and the archives let us know the bit of court-gossip that Baron Fred. von Milkau had given over 80,000 florins for the place. And probably Baron Fred in so doing went beyond his means: for the building was left unrepared, and when its present owner, Count Arnim's father, bought it in 1825, the palace was in a state of deplorable neglect. Count Arnim bought the castle at a period when money was scarce and dear, when 40,000 had the purchasing capacity of 100,000, and the place is now taxed for an assessed value of 150,000 thalers. The last great sculptor and architect to lay restoring hand on the burg-palace of Kriebstein was the late Prof. Haenel (in 1866).

As a rule, the newer a castle is, the more prominent appears the palace, or residence part of it. Kriebstein, like all mediæval burgs, has its "*palas*" as one important element, jammed in among the several other necessary elements of a large domicile. German castle-palaces for the rest are of four kinds:

- I. The low, irregular palace.
- II. The many-storied, irregular palace.
- III. The low, regular (barrock, rococo, pseudo-classical) palace.
- IV. The many-storied, regular palace.

The kind first mentioned are types of the most ancient Teutonic

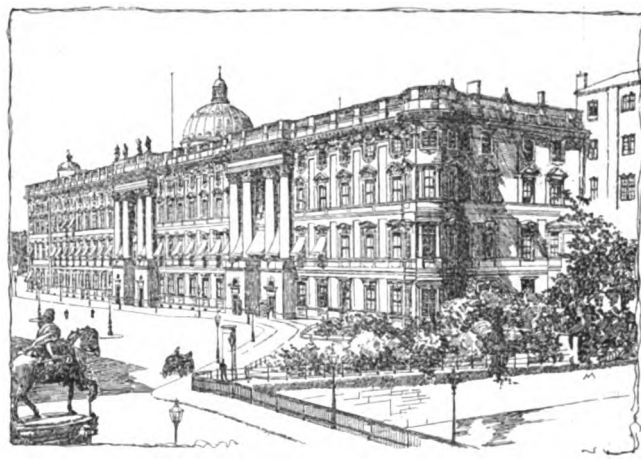


Fig. 47. Palace Berlin. Seventeenth and Eighteenth Century Form of High Palace.

*herrnhaus*, archæologists agreeing that the *saal* buildings described in the *Nibelungen Lied* and the greater number of the *vesta*, whose ruins are laid bare consisted chiefly of one story. This story was constructed upon foundations that rose several feet above the level of the ground. In front of the *saal* was a platform, not unlike the Dutch *stoep*, or stoop, as it is commonly written in America, this elevation serving, it is supposed, such various services as affording the

<sup>1</sup> Continued from No. 1031, page 133.

lord of the castle a stand for overlooking the goings-on in the castle court and of offering a convenient dismounting place for his guests. Quite a separate building housed the women of the castle, the lady and her spinsters and weavers. Their residence was provided with fireplaces, and from this fact it came to be called the "*keminate*" [*kamin* — fireplace]. Together, the lord's house and my lady's chambers were known as the *palas* (palace). A glance at the plan of the "Wartburg" (Fig. 4, Art. II<sup>1</sup>) will show the usual situation of the two houses; the "*keminate*" stands, in the quality of an appendage, at the left of the lord's house.

In the Kaiserhaus, in Goslar, Figure 42, which is the oldest palace in existence on the Elbe River, the *saal* and *keminate* are covered by a common roof. Whether this is a renovation or a restoration I cannot learn. The palace was built by Emperor Henry III, eight hundred and fifty years ago, and was much dilapidated when its restoration was ordered by the late Emperor William, in 1872. The *saal* portion of the Kaiserhaus occupies three-fourths of the building. It is denoted by large arched windows, the lights of which are divided by a sculptured column. The *keminate*, or women's part of the house, is divisioned off horizontally into low

man castle-palaces, and, indeed, they are no other than the palaces of Ludwig II, called the Mad, of Bavaria: all modern buildings. King Ludwig undertook to build surpassingly fine palaces, and his architects and advisers, as is well known, were the most proficient men that money and royal favor could command. Figure 43, the Castle of New Schwanstein, is typical of the oldest Romanesque burghs of the grandest sort, the principal original specimen of which is the Wartburg, founded in 1067. It is many stories in height. The roof has a steep slope, is penetrated by the breaking through of the top of a staircase tower, and by rows of small eyelet-windows in the shape of miniature gables. At the four corners are turrets, or look-out towerlets. The windows are numerous and comparatively small in size, with conspicuous spaces of clear wall between. They are of two or more lights, divided by small columns, with sculptured capitals and bases, with heads formed of semicircular arches and jambs constructed without any splay. There are a few bay-windows supported upon corbels, a bay at the end of the great *saal* being two stories in height, roofed with a hipped plain roof of moderate slope.

The base of the palace walls is buttressed. The gable of the

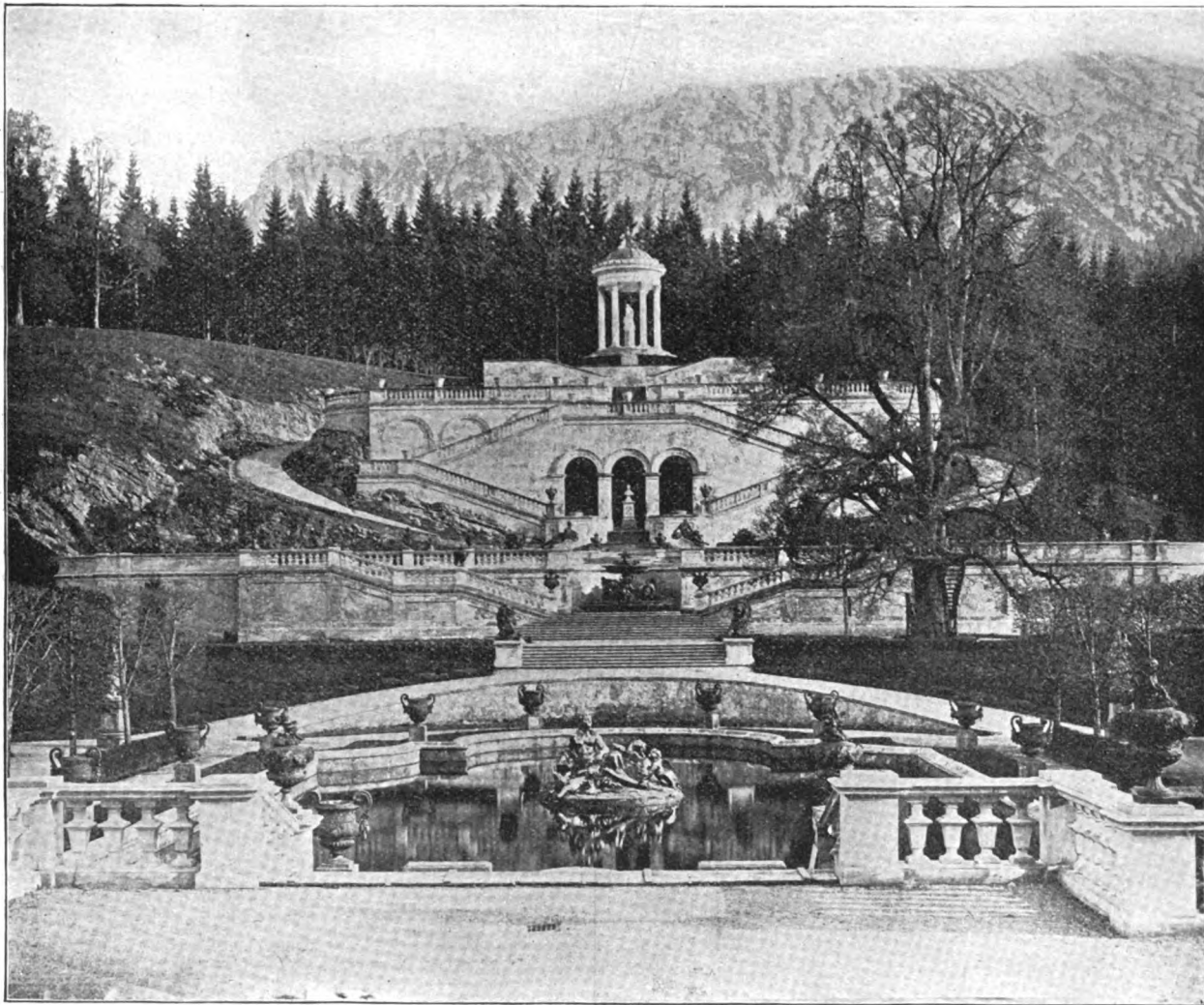


Fig. 45. Linderhof Park.

stories. The steep, high roof is penetrated by a gable and a row of "eyelets," and the fact that chimneys are few in number, and those few not over the *saal*, is noteworthy. Chimneys never yet have played anything like the rôle in German architecture which they have in France, as witness the palace roofs of the period of the French Renaissance and of the system Mansardian; and the greater the wonder, for the damp, cold climate of the northern part of Germany especially would seem to demand fireplaces in very great numbers.

They were, however, as a matter of fact, so scarce that they gave their name, as has been mentioned, to the chambers they were found in: "*keminate*," the "my ladies' chamber" of ancient English ballads. The robust knights and male retainers of a family, being warmed by their exercises out of doors, and by food and drink whenever they were in, needed, presumably, no fires. And these hardy forbears of the modern owners of great castles have left a hard problem indeed for engineers to overcome in leaving the thick walls of their enormous *saals* and stone-paved rooms devoid of flues.

I here let follow types of the other chief varieties of Ger-

man castle-palaces, and, indeed, they are no other than the palaces of Ludwig II, called the Mad, of Bavaria: all modern buildings. King Ludwig undertook to build surpassingly fine palaces, and his architects and advisers, as is well known, were the most proficient men that money and royal favor could command. Figure 43, the Castle of New Schwanstein, is typical of the oldest Romanesque burghs of the grandest sort, the principal original specimen of which is the Wartburg, founded in 1067. It is many stories in height. The roof has a steep slope, is penetrated by the breaking through of the top of a staircase tower, and by rows of small eyelet-windows in the shape of miniature gables. At the four corners are turrets, or look-out towerlets. The windows are numerous and comparatively small in size, with conspicuous spaces of clear wall between. They are of two or more lights, divided by small columns, with sculptured capitals and bases, with heads formed of semicircular arches and jambs constructed without any splay. There are a few bay-windows supported upon corbels, a bay at the end of the great *saal* being two stories in height, roofed with a hipped plain roof of moderate slope.

The base of the palace walls is buttressed. The gable of the gable-end has a series of steps up the sides, and is divided from the main portion of the (end) wall, by a neat moulding, ornamented underneath by blind arches — a reminiscence, as are the corbels of the projecting windows, of the earlier defensive *pechnasen*, or machicolations.

A plain Gothic development of this style of German palace is the Albrechtsburg (Fig. 3, I). Burg Friedland (Fig. 44), one of the still existing palaces of the ambitious Wallenstein, and is the Renaissance development of the same style. German palaces, as a rule, were lofty, had steep roofs, were gabled and were provided with an outside staircase-tower during five hundred years, or from the second century after Charlemagne down to the time of Schlüter's design for the castle in Berlin (1696).

The revolution in the fashion for palace-building, which began in the seventeenth century, was most mighty and thorough. There has never since been another of its like or importance. Ludwig the Second's two other pattern palaces in Bavaria, the Palace Herrenchiemsee and Figure 46, the Palace Linderhof, illustrate it.

In these the disposition of parts is regular, as it ever has been in palaces since the close of the seventeenth century, but extremely seldom before. The façade spreads out in a line most imposing by

<sup>1</sup> See *American Architect* for December 5, 1891, page 146.

its mere extent. The roof is invisible, or nearly so. Turrets are wanting; bay-windows are wanting; gables, that most favorite motif of German architects for centuries long, either are left wholly out of the design, or are modified into a semblance of ressaults. The space between windows becomes inconspicuous; the whole aspect of the building, in short, is quite changed. The style is more elegant, social and refined than the mediæval burg. It bespeaks less a taste and necessity for family exclusiveness; more love for ostentation, stateliness and social amusement. It answers, in fact, to the remarkable changes that took place in the manners of the time.

The devastations of the Thirty Years' War had left Germany, as a land, exhausted and poor; but German princes, more powerful because fewer in number, the weaker ones among them having been undone, just as in a commercial strife the poorer become bankrupt, while the exceptionally rich become wealthier. And these chief princes imitated the princes of Italy and France, that is to say, of the countries where no such war as their Thirty Years' War had put back the timepiece of civilization. The princes of Prussia, of Saxony, of Bavaria, of Würzburg, Würtemberg, Bayreuth, Baden all built, and built in imitation or rivalry of Italian and French palaces. In Berlin, the architect Schlüter began building an extension to the old castle for the *parvenu* King of Prussia in the most prodigious proportions. The four nearly square palace court-yards were to show, according to his project, what the so-called Second Court now shows — interior façades, with two colonnades, or loggias, one over the other, on the ground and first stories interrupted by an imposing ressault in the middle of each façade.

These ressaults are composed on the interior façades of attached columns of the Corinthian order, extending from the base of the

pictures and *objets de vertu* being among the fashionable delights offered in France to these nobles, the new self-made king ordered a copy of such a gallery introduced into his Berlin castle.

Schlüter accordingly moved the projected fourth wing of his design farther out, thus obtaining the long (western) front seen in the illustration. Schlüter, who was the most gifted architect who has ever laid hands on the Castle, intended this front for the main one because it looks towards the city. But before he could finish his work he was displaced from office, and Cosander von Goethe, who succeeded him in the favor of Friedrich Wilhelm, placed the main front in the narrow (northern) end of the building, overlooking what is now the Museum Park, where the front entrance had originally been. The portal with which he adorned it is a copy of the Arch of Constantine.

L. VON KROCKOW.

[To be continued.]

#### OUR LEGISLATORS AND OUR PUBLIC BUILDINGS.<sup>1</sup>

MR. CULLOM: I introduce a joint resolution, which I send to the desk and ask that it be read.

The joint resolution, S. R. 50, was read as follows:

*Resolved, etc., That, in addition to the amount authorized to be expended for the temporary employment of draughtsmen and skilled service in the preparation of plans and specifications for the public building at Chicago, Ill., as provided in the sundry civil appropriation act approved March 3, 1895, the Secretary of the Treasury is hereby authorized to use, out of the appropriation heretofore made, a sum not exceeding \$25,000 for the employment of a skilled architect to assist the Supervising Architect of the Treasury Department in preparing the designs, plans, specifications and other drawings for said building.*

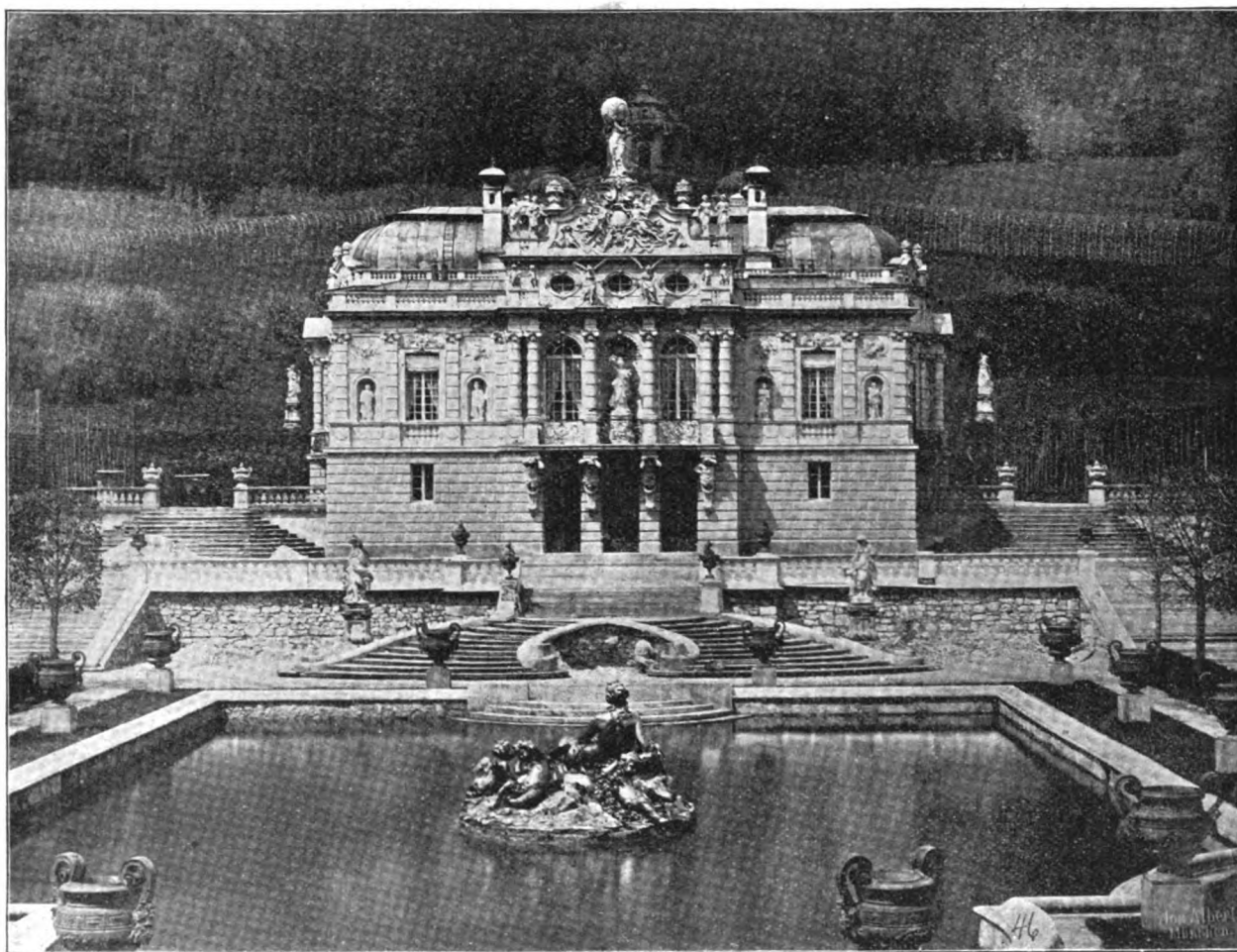


Fig. 46. Facade of the Linderhof.

building to the third floor, thence upward pilasters extend to the cornice of the flat, balustraded roof.

In the exterior façade (See Fig. 47, Castle in Berlin), the projectures consist of four massive columns each, supported upon bases one story in height, of plain coursed masonry, surmounted by an entablature.

Four of the ressaults of the castle contain each a grand staircase, which are known to modern visitors of the court by number, each of the four ranks of courtiers being relegated in court cards of invitation to its especial stairway and assemblage-room above in the third story; for the seventeenth century and the century following is the period in which originated the present form of court life, in which everything is done for a lord's guests, while his lowly-born menials are thrust out of sight, in the attics and basements. A gallery of

MR. CULLOM: I ask unanimous consent for the immediate consideration of the joint resolution.

MR. COCKRELL: Do I understand the proposition to give one architect \$25,000 for assisting?

MR. CULLOM: The proposition is to enable the Supervising Architect to do that which he cannot do under the existing law making the appropriation for that building — to have such an architect as is desired by him to prepare the plans. The bureau has not the force, and under the particular technical construction of the statute making the original appropriation the Supervising Architect has no power to employ assistance. After two or three consultations by my colleague and myself with the Secretary of the Treasury,

<sup>1</sup>[From the "Congressional Record," reporting proceedings in the Senate of January 9.]



the Supervising Architect says that it is impossible for him to proceed and do anything preparatory to the construction of the building without the passage of a resolution of this kind.

MR. COCKRELL: Let us hear the clause of the resolution read relative to proposing to appropriate \$25,000 for the employment of one architect.

MR. CULLOM: The resolution says "a skilled architect." I do not know whether it means one or more.

The VICE-PRESIDENT: The joint resolution will be again read.

The Secretary again read the joint resolution.

MR. COCKRELL: I shall certainly have to object to the joint resolution, and I shall ask that it go to a committee unless it is provided that the \$25,000 be for the employment of architects to assist, and not \$25,000 for one architect.

MR. CULLOM: I have no objection to making it "architects" instead of "architect."

MR. COCKRELL: Let it read "architects to assist."

MR. CULLOM: What is desired by the Secretary of the Treasury, as well as those of us who are interested in getting the plans of that building, is to push the work. The Secretary insists that with his present force it is impossible for him, unless allowed by law to employ an architect, to get the building started, under the pressure of hundreds of other buildings now being constructed. I have no objection to the word being in the plural number instead of providing for one architect.

MR. COCKRELL: As the joint resolution now stands, it proposes to appropriate \$25,000 for one year's service of an architect.

MR. CULLOM: I do not want anybody paid any more than he is entitled to. Let the word "architects" be inserted instead of "architect."

MR. BERRY: Is the joint resolution reported from any committee?

MR. CULLOM: It is not.

MR. BERRY: Then I object to it.

MR. CULLOM: Let me say that the joint resolution simply proposes to take the money out of the appropriation already made for the Chicago building, because we are not able to start the work as the law now stands.

MR. BERRY: I think the sum of \$25,000 to pay an assistant architect is unreasonable and ought not to be permitted by a resolution of Congress. The amount is out of all proportion, it seems to me, for a year's service of an assistant architect, and I am unwilling to allow a resolution to pass which makes provision to pay such a sum to an assistant architect or architects, whether there be one or more than one. I think the amount proposed is entirely too large, and for that reason I think the resolution had better go to a committee, and let the committee report on it.

MR. SMITH: Mr. President, I do not rise to object to the resolution offered by the Senator from Illinois, but only to say that in case his resolution shall be considered I shall desire to offer an amendment to it. I am fully aware of the fact that there is a lack of enough competent help in the Supervising Architect's office to conduct that bureau in anything like the manner in which it should be conducted to have it managed in a business-like way. Buildings in New Jersey are lagging behind on account of the want of additional force in the Supervising Architect's office. He claims that he is a year behind in his plans with most buildings. If there is any special effort made for any particular post-office, I shall propose to amend the joint resolution so that the Supervising Architect shall be authorized and money enough furnished him to employ sufficient help for all offices which are in the same condition as the Chicago office now is, so that the work may be completed in some reasonable time.

MR. MITCHELL, of Oregon: Mr. President, over a month ago, on the 5th of December, I introduced a resolution calling upon the Secretary of the Treasury for information as to the cause of the delay in the preparation of plans for the construction of a public building at Portland, Ore., for which the first appropriation was made several years ago. That resolution was adopted by the Senate on that day, and I have been waiting very anxiously for a response from the Secretary of the Treasury, which up to the present time has not materialized. I hope it may be forthcoming before the resolution submitted by the Senator from Illinois, Mr. Cullom, comes up for consideration to-morrow, and I shall then be in better condition to know how to vote. Possibly I shall desire to join my friend from New Jersey, Mr. Smith, in amending the resolution, and possibly not, depending somewhat on the nature of the information we get from the Secretary of the Treasury or the Supervising Architect.

MR. PALMER: Mr. President, this joint resolution relates to a special single public building. It has been prepared with reference to that building alone. It proposes to take from an appropriation already made \$25,000 to enable the Secretary of the Treasury to perform one part of his duty—an essential part of his duty. I regret exceedingly that any obstruction should be attempted to be thrown in the way of this particular resolution. After the most careful consideration by the Secretary of the Treasury, and the amplest conference among those who are interested, I think this special resolution ought to be passed.

In the face of the objection of the Senator from Arkansas, Mr. Berry, I suppose the resolution must go over under the rules, but it is due to the particular interest presented that this shall be considered separately. I regret very much that it should be mixed up

with other matters, because it has reference alone to a particular building which involves an expenditure of \$4,000,000.

MR. WHITE: Mr. President, I trust the Senator from Illinois will be able to so amend the resolution which he has introduced as to include other cases of a similar character. It seems to me that that can be done. I have in my mind the case of San Francisco, which is suffering in a degree but little inferior to that of Chicago. The Chicago case is the most pronounced in the United States, and next, certainly, comes the City of San Francisco. The Government has invested a very large sum of money in a lot in that city, and it has been supposed, because the appropriation had been heretofore made by Congress, that the work would be commenced upon the Government building there. The condition of affairs in that city is a disgrace to the Government and has been so for years in this regard, and it is all because the Congress of the United States has failed to provide adequately for the office under consideration. If practicable I hope the Senator from Illinois will be able to so frame the resolution he offers as to provide the Supervising Architect of the Treasury Department with the necessary means of carrying out the work enjoined upon the Department by Congress in reference to public buildings of the United States. The exigent cases are numerous and should be attended to, and from Congress must come the authority to do so.

MR. CULLOM: I think it unfair, after the Illinois delegation has frequently conferred with the Secretary of the Treasury with reference to the beginning of the work upon the building at Chicago, and after we have come to the conclusion that this ought to be done, when it is not proposed to take money out of appropriations for public buildings elsewhere, but merely to use a portion of the appropriation which has been made for the building at Chicago, that other Senators should insist upon tacking amendments on the resolution with reference to public buildings in their States.

This is, as my colleague says, a direct resolution, pertaining exclusively to the condition of affairs at Chicago, and I think in all fairness, as the subject has been thoroughly considered by the Illinois delegation, and by the Secretary of the Treasury, and what ought to be done has been determined upon, that the resolution should be passed. Then the Senate can adopt such general legislation amending the law relative to the Supervising Architect's Office as may become necessary in order to meet the demands of other sections of this country.

I am willing to amend the resolution so as to make it apply to architects for that building.

MR. BERRY: Will the Senator from Illinois yield to me for a moment?

MR. CULLOM: Certainly.

MR. BERRY: Mr. President, I wish to state to the Senate that there is no public building in my State situated similarly to the one in Chicago, and I do not desire to have the Senator's resolutions amended. The objection I have to the resolution is that it says the Secretary of the Treasury may employ an assistant architect at a salary not to exceed \$25,000.

MR. CULLOM: It does not say anything about salary.

MR. BERRY: It proposes to appropriate a sum not to exceed that amount. The Senator from Illinois says it is to be taken out of the appropriation already made for the public building at Chicago. There is no one who knows better than he that the time will come when it will be claimed that the appropriation originally made was insufficient to finish the building, and that other appropriations will be required. If it is intended to pay an assistant architect \$25,000 a year for his services, and if the money is to be expended on the extensive scale proposed by the resolution, I think that is conclusive evidence that a very large additional appropriation will be required before that building will be completed. I think, therefore, that the resolution had better go to a committee, and let it be amended, guarded and changed in such a way that it will not show that the Senate is willing to pay to an assistant architect the enormous sum of \$25,000 a year.

MR. CULLOM: I merely desire to say one word, and then the Senate can do what it wishes with the joint resolution. The Senate remembers very well that it has now been a year or more since the original appropriation was made for the beginning of the work upon a new public building in Chicago, and yet the Secretary of the Treasury has not been able to do the first thing with reference to it. Is it to be the fact that the City of Chicago, which is paying into the Treasury on account of the postal service millions upon millions more than is expended in the conduct of the post-office in that city, shall go without proper accommodations for the transactions of its postal business? What we desire and what we are entitled to is to get the work started. We can not do it under the present condition of affairs unless Congress gives the Secretary of the Treasury an opportunity to employ assistants to help in the preparation of the plans.

The joint resolution relates exclusively to the post-office at Chicago, and it seems to me that the Senate ought to allow it to pass, in order that there may be no further delay with reference to the work.

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the Supervising Architect says that it is impossible for him to proceed and do anything preparatory to the construction of the building without the passage of a resolution of this kind.

MR. COCKRELL: Let us hear the clause of the resolution read relative to proposing to appropriate \$25,000 for the employment of one architect.

MR. CULLOM: The resolution says "a skilled architect." I do not know whether it means one or more.

The VICE-PRESIDENT: The joint resolution will be again read.

The Secretary again read the joint resolution.

MR. COCKRELL: I shall certainly have to object to the joint resolution, and I shall ask that it go to a committee unless it is provided that the \$25,000 be for the employment of architects to assist, and not \$25,000 for one architect.

MR. CULLOM: I have no objection to making it "architects" instead of "architect."

MR. COCKRELL: Let it read "architects to assist."

MR. CULLOM: What is desired by the Secretary of the Treasury, as well as those of us who are interested in getting the plans of that building, is to push the work. The Secretary insists that with his present force it is impossible for him, unless allowed by law to employ an architect, to get the building started, under the pressure of hundreds of other buildings now being constructed. I have no objection to the word being in the plural number instead of providing for one architect.

MR. COCKRELL: As the joint resolution now stands, it proposes to appropriate \$25,000 for one year's service of an architect.

MR. CULLOM: I do not want anybody paid any more than he is entitled to. Let the word "architects" be inserted instead of "architect."

MR. BERRY: Is the joint resolution reported from any committee?

MR. CULLOM: It is not.

MR. BERRY: Then I object to it.

MR. CULLOM: Let me say that the joint resolution simply proposes to take the money out of the appropriation already made for the Chicago building, because we are not able to start the work as the law now stands.

MR. BERRY: I think the sum of \$25,000 to pay an assistant architect is unreasonable and ought not to be permitted by a resolution of Congress. The amount is out of all proportion, it seems to me, for a year's service of an assistant architect, and I am unwilling to allow a resolution to pass which makes provision to pay such a sum to an assistant architect or architects, whether there be one or more than one. I think the amount proposed is entirely too large, and for that reason I think the resolution had better go to a committee, and let the committee report on it.

MR. SMITH: Mr. President, I do not rise to object to the resolution offered by the Senator from Illinois, but only to say that in case his resolution shall be considered I shall desire to offer an amendment to it. I am fully aware of the fact that there is a lack of enough competent help in the Supervising Architect's office to conduct that bureau in anything like the manner in which it should be conducted to have it managed in a business-like way. Buildings in New Jersey are lagging behind on account of the want of additional force in the Supervising Architect's office. He claims that he is a year behind in his plans with most buildings. If there is any special effort made for any particular post-office, I shall propose to amend the joint resolution so that the Supervising Architect shall be authorized and money enough furnished him to employ sufficient help for all offices which are in the same condition as the Chicago office now is, so that the work may be completed in some reasonable time.

MR. MITCHELL, of Oregon: Mr. President, over a month ago, on the 5th of December, I introduced a resolution calling upon the Secretary of the Treasury for information as to the cause of the delay in the preparation of plans for the construction of a public building at Portland, Ore., for which the first appropriation was made several years ago. That resolution was adopted by the Senate on that day, and I have been waiting very anxiously for a response from the Secretary of the Treasury, which up to the present time has not materialized. I hope it may be forthcoming before the resolution submitted by the Senator from Illinois, Mr. Cullom, comes up for consideration to-morrow, and I shall then be in better condition to know how to vote. Possibly I shall desire to join my friend from New Jersey, Mr. Smith, in amending the resolution, and possibly not, depending somewhat on the nature of the information we get from the Secretary of the Treasury or the Supervising Architect.

MR. PALMER: Mr. President, this joint resolution relates to a special single public building. It has been prepared with reference to that building alone. It proposes to take from an appropriation already made \$25,000 to enable the Secretary of the Treasury to perform one part of his duty—an essential part of his duty. I regret exceedingly that any obstruction should be attempted to be thrown in the way of this particular resolution. After the most careful consideration by the Secretary of the Treasury, and the amplest conference among those who are interested, I think this special resolution ought to be passed.

In the face of the objection of the Senator from Arkansas, Mr. Berry, I suppose the resolution must go over under the rules, but it is due to the particular interest presented that this shall be considered separately. I regret very much that it should be mixed up

with other matters, because it has reference alone to a particular building which involves an expenditure of \$4,000,000.

MR. WHITE: Mr. President, I trust the Senator from Illinois will be able to so amend the resolution which he has introduced to include other cases of a similar character. It seems to me that can be done. I have in my mind the case of San Francisco which is suffering in a degree but little inferior to that of Chicago. The Chicago case is the most pronounced in the United States next, certainly, comes the City of San Francisco. The Government has invested a very large sum of money in a lot in that city, as has been supposed, because the appropriation had been heretofore made by Congress, that the work would be commenced upon Government building there. The condition of affairs in that case is a disgrace to the Government and has been so for years in regard, and it is all because the Congress of the United States failed to provide adequately for the office under consideration practicable I hope the Senator from Illinois will be able to so amend the resolution he offers as to provide the Supervising Architect the Treasury Department with the necessary means of carrying on the work enjoined upon the Department by Congress in reference to public buildings of the United States. The exigent cases are numerous and should be attended to, and from Congress must come the authority to do so.

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THREE HOUSES ON EIGHTY-SECOND STREET AND ELEVENTH AVENUE, BALTIMORE

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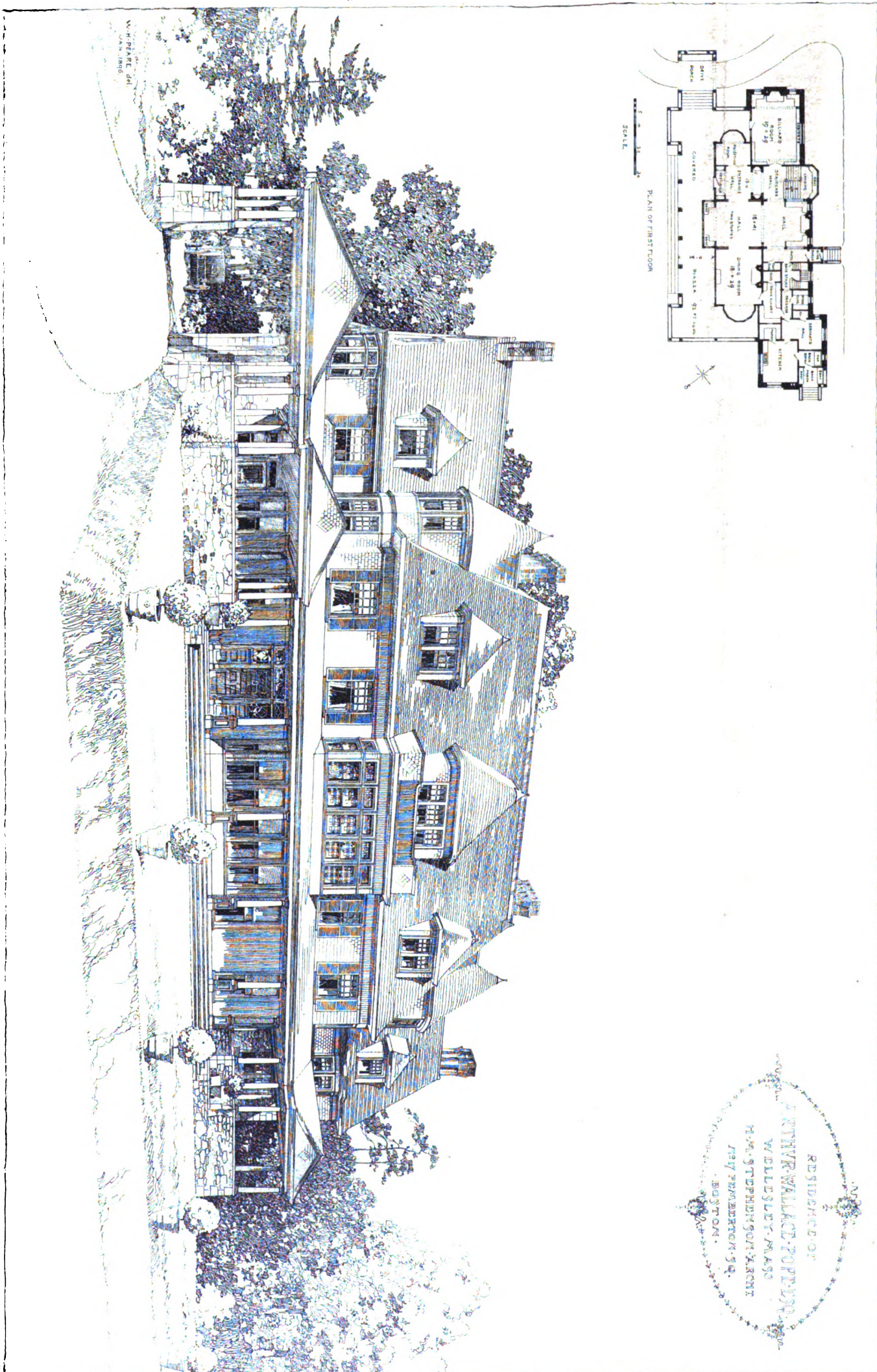
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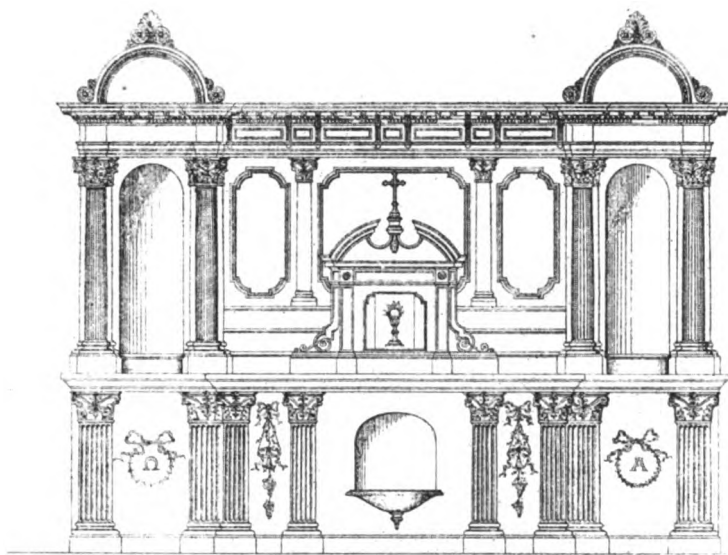


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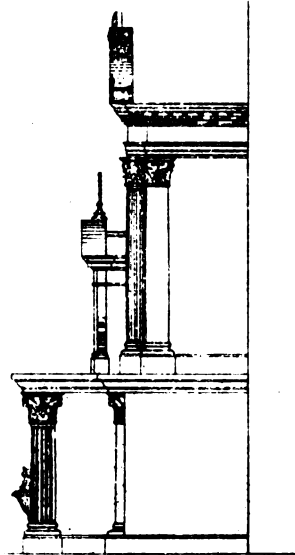
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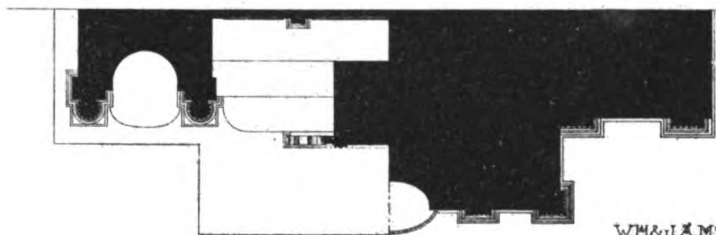




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PLANS

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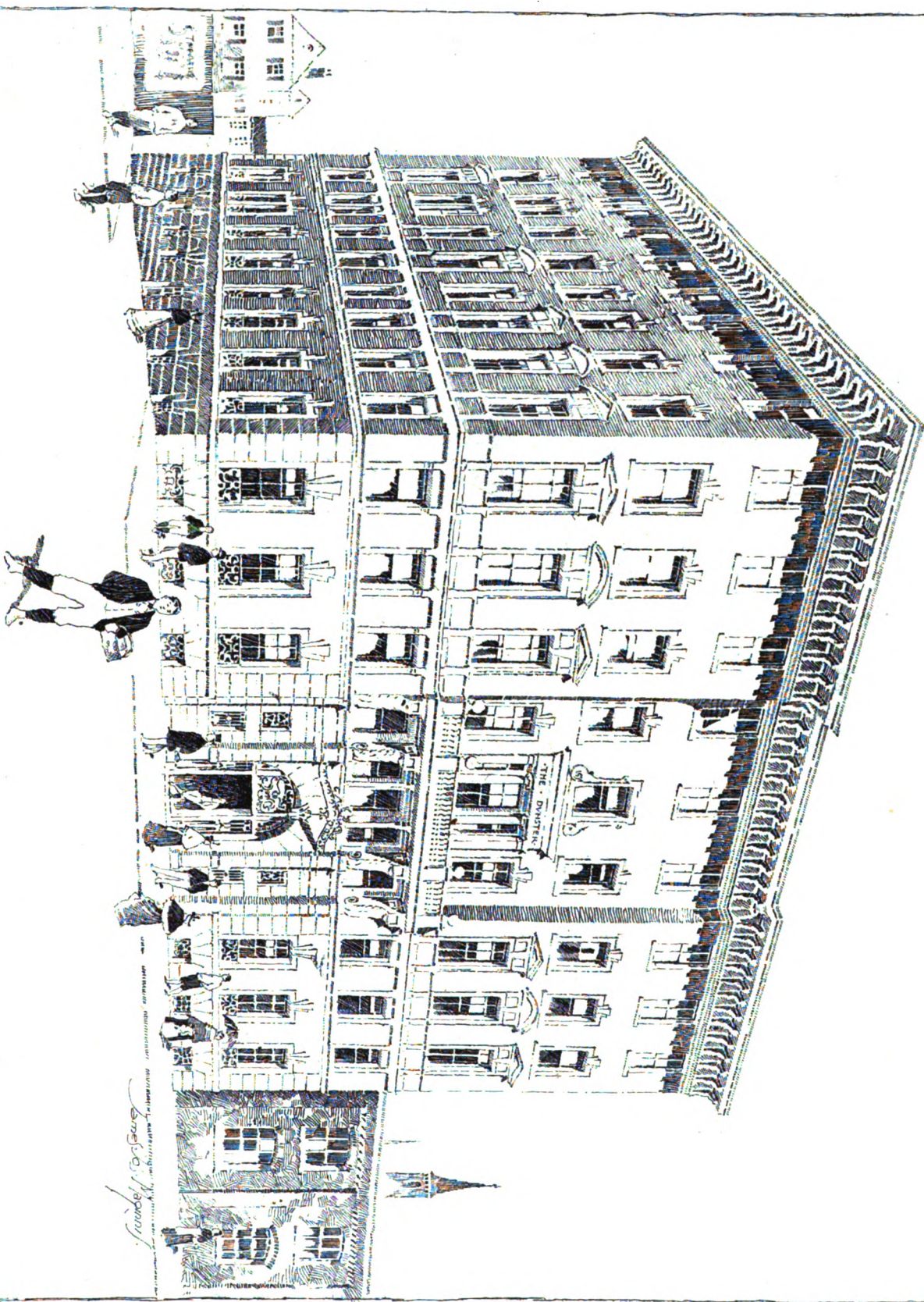
SCALE 1/4" = 1 FT.

DRAWN BY T. F. POWER.



PROPOSED HOUSE AT  
CHICOPEE FALLS, MASS  
GUY KIRKMAN, ARCHT

SEE 1775 FRONTIS CO. BOSTON



"THE DUNSTER": DORMITORY, CAMBRIDGE, MASS., FOR JOHN ALBRO LITTLE, ESQ.

LITTLE, BROWN & MOORE, Architects.

ILLUSTRATION BY THE AMERICAN ARCHITECT & BUILDING NEWS CO.





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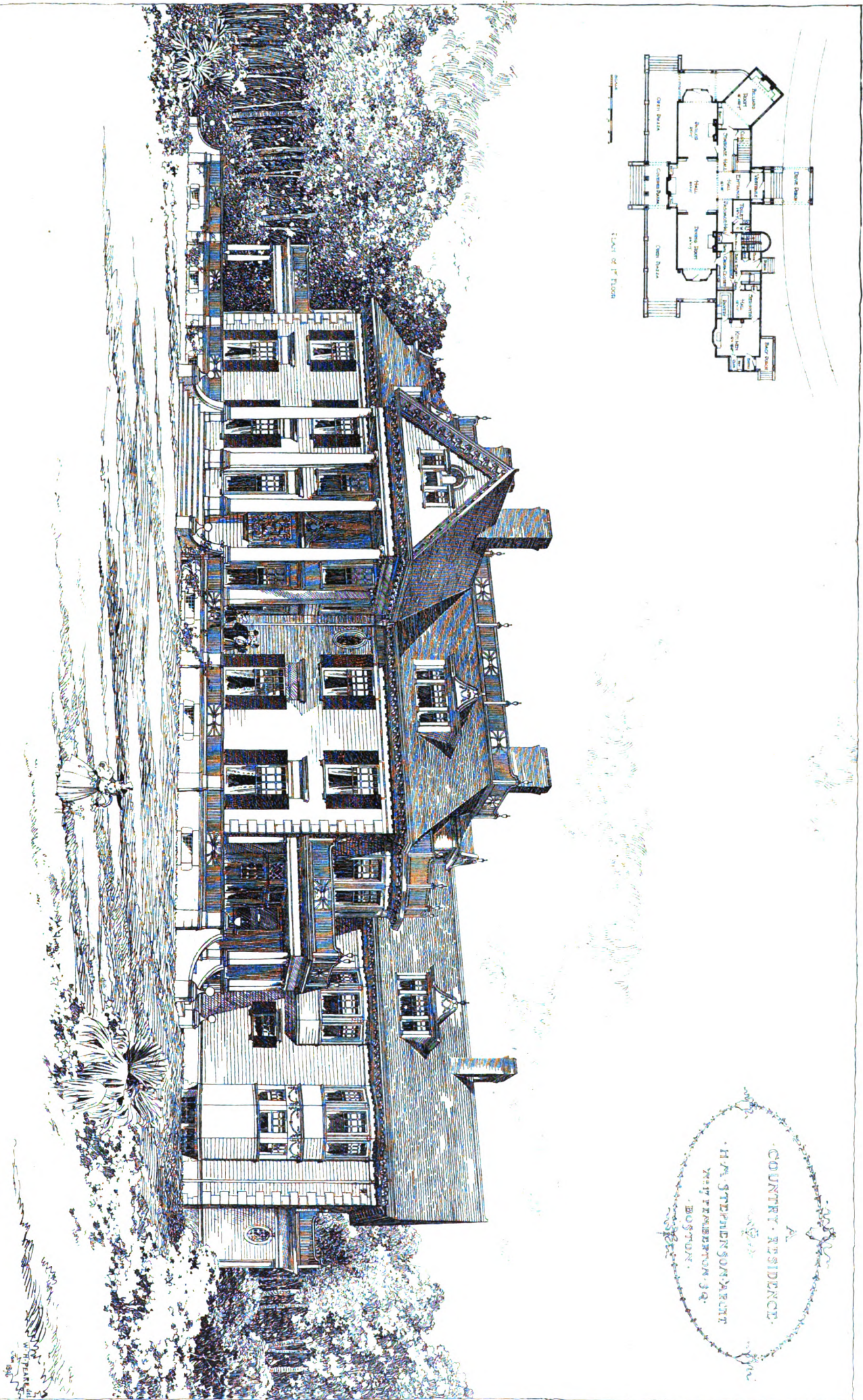


ILLUSTRATION BY J. B. BARTON





as brief a time as possible, considering it a measure of prudence to get out. I would not do anything in the world to impede the completion of the building.

But if it be the opinion of the parties most interested and the opinion of the Senators from Illinois that the joint resolution should be unamended, I shall not interpose an objection. I have called attention to what I conceive to be a grave defect in the laws and in the administration of the laws regarding the construction of public edifices.

MR. PALMER: In reply to the Senator from New Jersey, Mr. Smith, and the Senator from California, Mr. White, I will state that if at any time an appropriation shall be made for public works in the States they represent, and they simply ask that a part of the appropriation already made shall be devoted to a particular purpose, I shall certainly assist them to the best of my ability in passing any resolution for which they may ask.

Here is a case where an appropriation has been made. The necessity of the work has already been determined by the Senate, and those who are familiar with the facts know that the need of a building is pressing. The present building is unfitted for public purposes. It has become dangerous. The Senate has considered all the questions involved in order to construct the building, and has joined in making an appropriation. As nothing is proposed here beyond a provision authorizing the use of a certain portion of the money for a specific purpose, which, in the judgment of the Secretary of the Treasury, is necessary and without which he can not proceed farther, it seems to me this case ought to stand upon its own ground. It ought not to be mixed up either with the propositions or the complaints of other Senators. That is all there is of it. It is not proposed that a salary shall be paid to any particular person, but that the Secretary of the Treasury may obtain, by means of the appropriation already made, such additional architectural assistance as the particular case requires. That the Secretary of the Treasury himself insists is necessary. Without it nothing further can be done.

The Senator from Arkansas, Mr. Berry, intimates that a further appropriation may be asked hereafter. I will not say that that may not be true; but if such an event should happen, if the time should ever come when money is asked, I suppose the Senate will then be prepared to act upon the necessity of that requirement. This particular sum of money is needed as a preliminary to the work. Without it nothing more can be done. The matter stands as it is to the detriment of the public interest, not the interest of Chicago alone, but the interest of the whole country, so far as it depends upon the conduct not only of the postal service, but of all branches of the public business, while the Government is paying large sums in rent because the building heretofore used is unfit for occupancy.

I trust, therefore, that we may be allowed to obtain the attention of the Senate to this particular joint resolution and secure its passage.

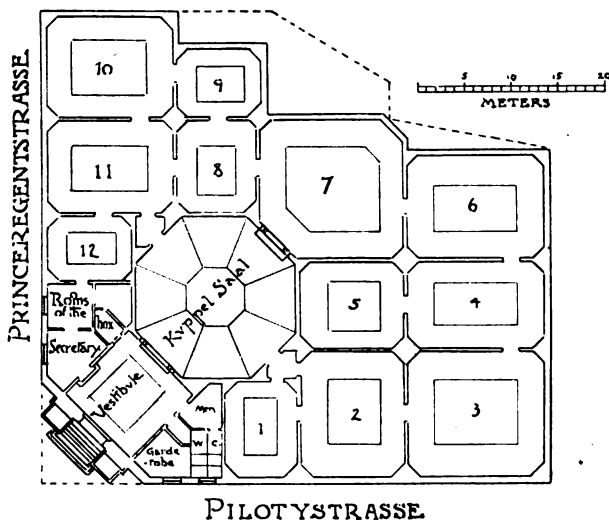
MR. CULLOM: I hope my friend from Arkansas will not object.

MR. BERRY: I object to the consideration of the joint resolution to-day. I am compelled to object to its passage to-day unless it is referred to a committee.

MR. CULLOM: Then let the joint resolution go over.

The VICE-PRESIDENT: Objection being interposed to the present consideration of the joint resolution, it goes over.

#### THE "SECESSION" OF MUNICH.



THE new galleries of the "Secession," on the corner of Piloty and Prince Regent Streets, opposite the English Gardens, are admirably adapted to their purpose. The entrance leads, through a spacious vestibule flanked by the offices and *garderobe*, to a large octagonal room with domical ceiling, the Kuppel Saal, about which twelve smaller rooms are grouped concentrically.

The annexed plan will give the dimensions of these rooms, and their light supply.

"Secession" is a *nom de guerre* of the "Verein Bildender Kuenstler

Muenchens (A. V.)," which enrolls four honorary, one hundred and twenty-four active, and, in addition to these, about one hundred and seventy contributing, members. Josef Israels, of the Hague, is the great name among the honoraries.

Fritz Uhde and Franz Stuck are doubtless best-known among those of the active men, outside of Germany. The list of corresponding members bristles with celebrities, among them Blommers, Mesdag, de Bock, Clays, the Marises and ter Meulen, Carolus Duran, Benjamin Constant, Dagnan-Bouveret, Lhermitte, Dannat, Morot, Raffaelli and Renouard, Khnopff and Leempoels, Gari Melchers, Zorn, Herkomer, Oules, Parsons, Troubetzkoy, Chase, Harrison, Villegas, Skarbina — and more, of equal fame.

The exhibition of this year, which closed October 31st, contained 642 works from 302 artists; 565 of the numbers were on sale, of which in all 142, about one quarter, were sold, realizing a sum of 238,680 marks, or about \$57,170. The sales were divided among the exhibitors of various nationalities as follows:

Belgium 8, Scandinavia 4, Germany (outside of Munich) 13, Munich 49 (out of 155 offered), England and Scotland 47, a remarkably high percentage, France 5, Holland 8, Italy 1, Austria 2, Switzerland 5, of which 3 were Böcklin's.

Of the works sold, 81 remain in Germany, Prince Regent Luitpold of Bavaria being the purchaser of 6, Bavaria acquiring 7 for the Pinakothek and the Glyptothek, other German galleries 7, private buyers from Munich 11, and private buyers from the rest of Germany 50 works. The sale of tickets brought in 66,418 marks, \$16,604.50.

To my mind, among the various schools, the Dutchmen and the Belgians are well to the fore. Josef Israels's great picture, the "Anchor-bearers," is a noble painting, one to come back to more than once. It is a large canvas nearly filled by the forms of two weatherbeaten old fishermen, one bracing along under the heavy anchor, the other lifting the wet hawser behind him. To seaward there is a wild gray "smother" of wind and wave. The bluff bows of a couple of Dutch luggers swing up on a breaker in a corner of the picture. There is a glorious whiff of the brine in it all.

Not far away hung the old painter's portrait of himself — lent to the "Secession" by the "Pulchri Studio" of the Hague — a forceful bit of honesty and strong painting.

Blommers has another story to tell in his "Knöchelspiel," a group of little children playing within the open door of a cottage, the peasant mother stopping a moment from her work to look down upon them. The children kneel and sit upon the rough stone floor in a flood of sunshine coming in at the door. Spring is without in the orchard. The color is keyed pretty high throughout — up to "Illuminist" pitch, in fact.

Josselin de Jong, with a turn for somewhat gloomy things, loves to paint the pathos in lives of toil. His picture, "Der Acker," shows the wide brown sweep of a land-wave, in the low country, where a grim peasant, driving a double harrow over the long furrow, is alone. Théophile de Bock's "Birkenallee" has, by contrast, a joyous note, the white stems of the birches gleaming in the sunshine along the rough road running right away into the picture.

A canal in Dordrecht — by Koldewey, I think — is a very quiet bit, as it had to be, with a limited range of color in which brown shadows play a good part in keeping things well together and holding them to the key.

The name of Maris distinguishes three canvasses, Jacob's "On the Strand" and "Morning in Dock" being full of his usual bold brushwork.

Leempoels is remarkable in all three of his pictures, of which the largest is "Friendship," and the strangest "Fate." In "Friendship," two rather ordinary old fellows are sitting together in a high-backed Gothic chair of ecclesiastical form. Their arms are about one another's shoulders, the other hands clasped together upon their knees. One wears a faded green coat, the other a coat of purplish red. Were it not for the modern shape of the garments, with a little queer in cut, this picture with its minute rendering of hair, wrinkled faces and surfaces of stuffs, might be the work of a Fleming of the early sixteenth century, in the workshop of Quentin Massys, perhaps.

His "Fate" has even more suggestion of mediævalism, and carries us back still an hundred years farther into the past, to the days of Roger Van der Weyden: from out a darkling sky shines forth a great brooding face high above a boundless plain of uplifted human hands — only hands — hands with cross and crozier — hands with sceptre and sword — hands in chains — hands of blood, of toil — women's hands and those of little children.

Fernand Khnopff, also of Brussels, is another mysticist, but while Leempoels's work is intelligible, considerable study leaves this artist's pictures still insoluble mysteries — to the uninitiate, at least. At the "Secession" he had two paintings in oils, tall narrow panels. Down the middle of one is painted darkness under a veil of gauze, upon whose surface several irregularly occurring explosions of color suggest, possibly, jewels. In the gloom behind the veil dimly floats the lovely pale face of a woman, and, less surely seen, the white gleam of undraped limbs. This picture is called "Perhaps!"

In the other panel, entitled "A Blue Wing," there is a Greek girl, with a blue seal upon her lips, standing behind a draped table or couch on which is a marble head with one blue wing outstretched from the right side of the face. The treatment of the subject is classic, and its meaning will doubtless be obvious to the student of

ancient myths, or, at least, partly so, for it is not a principle of Fernand Khnopff's art to be wholly intelligible. As with the poetry of the "Dacadents," his subtle fantasy is not for ordinary minds nor wholly grasped by any thought except, perhaps, his own. The two Flemish interiors, by Marcette, of Ghent, are simple, homely old rooms, beautifully mellow in tone and broadly painted.

After having read what the very famous Mr. Raffaelli has to say about the greatest of the French impressionists, one will regret to find that one does not appreciate Manet's picture. It is a large canvas, entitled "The Old Musician," in which a dreary old man in a battered top hat is fiddling to some bundles of old clothes, for truly the ill-formed figures of the group convey scarce more suggestion of life. The kind of pathos meant was, doubtless, of the sort Dagnan-Bouveret has so beautifully expressed in a picture of his — a young woodsman playing at evening to his comrades — but it is wanting here.

Mr. Raffaelli's own work carries more suggestions. In his drawing of the Madeleine, however, one is not quite in sympathy with certain yellow streaks, doubtless an original and unhackneyed treatment of shadows, which suggest a straw-rick in the portico. In such bits as the "Ragpicker," and the "Burgomaster of the Village," one feels that he has grasped the essential thing, the soul of his subject, but when he paints architecture, or trees, for instance, Mr. Raffaelli's art surely taxes even a lively imagination. Does one have an impression of snakes and angleworms on observing tree-branches, except upon the canvas of Jean François Raffaelli, and must architecture be viewed only in times of earthquake?

Among the works of the Munich men of the newest movement there are some things which combine much disgusting suggestiveness with bad painting of a lurid sort, but these are rare, and, in general, the school is distinguished by effective painting. The "Salome's Dance" of Slevogt, and Fritz Hass's "Night," were among the remarkable things. There is less moral, if more physical, repulsiveness in von Heyden's "Rest in the Pigsty," — the German "Ruhe im Saugarten" conveys the idea better — wherein the artist broadly, but in detail, sets forth the charms of the pink bellies of sleeping sows.

Franz Stuck is, in this kind of thing, and in much else, the master of them all. His great canvas, "War," easily dominated the last year's exhibit. There is no denying the power of the conception — a huge naked frowning warrior bearing across his shoulder a dripping two-handed blade, astride a great black horse near spent, but picking painful steps among the rotting corpses of a field of slain, the two outlined against the night and the flames of burning villages. It was bought for the Pinakothek. His picture of this year has scarce less power. In "The Sphinx" the broad virile character of Stuck's brush shows strongly. His line is heroic, his lighting effective. His manner of brush-work and his color-feeling follow seventeenth-century traditions, one might say.

The story of the picture tells itself forcefully. The monster crouches upon a broad rock, and her woman's head and bust are in the light. A man kneeling at the stone receives her kiss of death, one arm about her neck, the other pushing against the brute body dimly seen in the shadow. His head is bent back, her beautiful shadowy face pressed down upon his, her long hair sweeping darkly down behind the two heads. The great claws are already tearing into his flesh, the muscular arms straining his form against the face of the rock, upon which at his side is an old blood-stain. The drawing of this subject, the modelling and the disposition of light and shadow are masterly. Color is held as secondary. There is clever painting in the transition from the hairy hide of the beast to the tender whiteness of the woman's bust. He repeats this trick in his "Centaur and Nymphs," a disagreeable picture which delineates the flirtation of a man-headed dray-horse, with a piebald coat like an old hair trunk, and a group of undressed kitchen maids.

"Professor Franz Stuck's Portrait," by Leo Samberger, Munich, is a Rembrandtesque piece, full of interest. The painter's head, as he limns it, is round and massive, the brow broad and low, the eyes full and wide apart, the lips coarse and thick, the jaws square, — the whole effect, one rather of animal than of intellectual force.

Bruno Piglhein's portrait of "Frau Professor Piglhein" may fairly be set down as great portraiture. In a pose as natural and graceful as it is original, the lady turns toward us from a table at which she sits, and with her right arm along the chair-back, leans her chin upon the back of her hand and smiles upon us. The left hand stretched along the table, and playing with her yarn and needles, makes an effective bit of foreshortening. Breadth, skilful technique, and refinement are united in this charming work.

A dashing and effective full-length back view of Mme. Sarah Bernhardt, by de la Gandara, of Paris, hangs in the Kuppel Saal, where are most of the very large canvases.

Dannat's two pieces, "Sol y sombra" and "Portrait," have his luminous clear color in a high degree.

James McNeill Whistler's "Lady in Furs," presumably a portrait, is a good example of his well-known late manner, not comparable however to one or two others of his, as, for instance, that beautiful twilight black and gray study of his mother, bought by France for the Luxembourg. The head of a young man by Albert Haucisen, of Munich, has strength and good coloring. Ernestine Schultze-Naumburg's portrait, of a lady and little girl, is hardly less clever.

The latter's brother exhibits a landscape called "The Lonely

House," a dreary dwelling on a wind-blown hill under hurrying clouds, which stirs the imagination.

The Scotchmen show in great force, their best things being landscapes. Frew's "Morning on the Clyde," wet and broad, Hamilton's "On the Sands," and some of Mr. Paterson's work — among which is a very large landscape called "Borderland," showing a fine wide stretch of rolling country under a sky of flying cumulus — are very fine.

Among the water-colors, also, Mr. James Killniess Paterson has some very fetching things, where clever effects are brought about by various means, some of them original and striking, such as the "Dunes," where the sponge or the rag has made great play among the sand-heaps, and "Wind-blown Trees," behind whose brown gnarled stems the knife has scraped out a high light in just the right place.

Mr. Arthur Melville's Spanish sketches have all his well-known cleverness. His things are done with a quick full brush seeking to render effects in a broad way, lingering little over details, and attaining a brilliancy which reminds one of Madrazo. His scheme of color is warm, and takes into account the value of strong contrasts. One is rather taken up with too obvious tricks of method in his work, and in that sense it falls short of being of the best, and is, perhaps, tiresome. Mr. Walton works upon somewhat similar lines, and perhaps both he and Mr. Melville are too ready to sacrifice the transparent freshness of pure water-color washes for the piquancy of effects attained by free use of body color.

These artists also avail themselves freely of the somewhat doubtful help of tinted papers, which, however useful for rapid suggestions, are apt to bring about a somewhat false estimate of color values. I remember one or two sketches of Mr. Walton's in the last year's exhibit, which upon inspection resolved themselves into a few dots of body color in a vast expanse of gray board, which, with a little closing of one eye, did excellently as misty morning backgrounds and such like. Whether such accidental results are worth the trouble they cost is another question.

In Skarbina's charming pastels he has not aimed to produce oil and water-color effects, but has used his medium with frank admission of its limitations. His subjects are mostly picturesque old Berlin houses along the Spree banks.

Hans Hermann, another Berliner, shows very skilful handling of water-color in a bit of canal at Dordrecht. A sketch in tempera on canvas is cleverly rendered by Huisier, of Brussels: a number of Flemish fisherfolk on the beach stand gazing seaward into a stormy blending of sea and sky. The whole is in soft grays and blacks, very fresh and with some crisp drawing.

Henry George's Japanese subjects evidence a remarkable knowledge of Japanese art methods. They have hardly more than decorative value, in which sense the boldly-colored drawings for faience by Josef Engelhart, of Vienna, also interest by their Oriental richness of color and form.

No space is left for many things both beautiful and interesting, yet undiscussed.

The etchings of Besnard, masterly in line, those of Herkomer, with their masses of velvety blacks, triumphs of tone and printing, Troubetzkoy's charming head, in bronze, of Amelie Rives Chanler, Frampton's beautiful bronzes in verd antique, the "Mysteriarch," the "Vision" and many other works in all departments, are well worth study.

The exhibit, as a whole, assuredly reached a high standard of excellence, an excellence whose modernity was pleasantly tempered by sweet reasonableness in a rather greater degree than with former displays of the "Secession."

A. B. BIBB.

#### THE CARLYLE CENTENARY.

ON Wednesday, December 4th, the centenary of Thomas Carlyle's birth was observed, one event of the day being the formal opening to the public of the house in Cheyne Row where he resided for many years — although since July last it has been visited by nearly seventeen hundred persons, many of whom were Americans. The freehold was purchased for £1,750, of which about one-third came from America and £100 from the Emperor of Germany. An interesting memorial volume, "*Carlyle's Chelsea Home*" has been written by Mr. R. Blunt, son of the genial Rector of Chelsea. It has been daintily got up and is well illustrated. A loan collection of memorials, consisting of portraits, letters, etc., and many well-preserved household possessions of Thomas and Jane Welch Carlyle, was opened also on the 4th, and remained on view for a month. Among them was Lady Ashburton's "Interior at Chelsea," painted by Tait, and several sketches and water-colors by Mrs. Aillingham, all of which help to recall the old aspect of the various rooms. In Tait's picture, Carlyle, who stands by the fireplace filling his "churchwarden," looks, being beardless, not unlike Sir Walter Scott; but we must say the sunny room appears far more cheerful than Mrs. Carlyle's face; the eyes bear traces of many a tear!

The bookcases stand in the back room filled with the great man's books, among them being Morris's "*Earthly Paradise*," with the inscription on the fly leaf, "Thomas Carlyle, with his scholar's love, John Ruskin, 1870."

On a small table in the corner stands the cast of his head taken after death. In all the rooms are cases of interesting letters, etc.: Carlyle's passport, signed "Malmesbury"; a letter from Bismarck,



one from Goethe; and some cards with verses accompanying presents; also a bit of wrought-iron chain ornament sent to Mrs. Carlyle; on the staircase outside hangs the large photograph by Stieler, — all showing the great friendship that existed between the two writers. Besides these there is Disraeli's letter offering a pension, and Carlyle's reply "to his munificent proposal which is worthy to be called magnanimous."

Extracts from "*Frederic the Great*," compiled by the late Emperor Frederic with autograph inscription: "To Thomas Carlyle as a token of personal regard and a mark of the sympathy felt in Germany for the British author of Prussian History which has been so widely appreciated in England, and is so greatly valued by the Countrymen of Frederic the Great. Frederic William, Crown Prince of Germany & Prussia."

Perhaps the furniture is as interesting as anything in the house, *e. g.*, the veritable dining-table, some chairs and a sofa. The grate had been removed, but was traced to Islington where it was dug out of a heap of old iron, brought back and reset. The old fender and fire-irons are in front of it. In the drawing-room stands the writing-table on which all his works were written, except "*Schiller*": it was bequeathed to Sir J. Stephen. The back room was Mrs. Carlyle's bedroom, but shortly before his death, Carlyle was brought down to it. In his own bed-room there still stands the four-post bedstead, his bath, some pictures, and, under a glass case, his beaver hat of enormous size, while near it is placed his walking-stick. At the top of the house is the garret room which cost Carlyle £200 to have fitted up as a study, in the hope of getting quietness, and in which he wrote "*Frederic*." It is like a studio, lighted from above, "the sublime garret, double-doored, double-windowed, impervious to sound." "This most entirely detestable and despicable piece of human workmanship" turned out a failure; too hot in summer, too cold in winter.

After leaving the house one did not forget to visit the statue on the embankment at the foot of the street, in order to see a most charming object — the wreath formed of two palm branches tied together by lovely variegated foliage and suspended by wire from the top of the pedestal.

The ceremony of handing over the title-deeds of "No. 5" to the representative of the Carlyle Memorial Trust was to have taken place in the Chelsea Town-hall, but so many persons applied for tickets that it was held in the gymnasium of the South West London Polytechnic, Chelsea, where some seven hundred persons were assembled. The chair was taken by the Right Hon. John Morley. Letters and telegrams were received from several eminent persons unable to be present, namely, Lord Ripon, Lord Roseberry, the American Ambassador, "Ian Maclaren" and others.

The deeds having been received by Dr. Garnett of the British Museum in the absence of Mr. Leslie Stephen, the large audience settled itself to hear Mr. Morley's speech, of which it is impossible and unnecessary to give more than a word or two: "Carlyle is called 'The Sage of Chelsea' . . . I think a sage is just what he was not . . . I prefer, and I hope you won't think me pedantic, to reserve that particular word for men like, in our own day, Goethe, and like Wordsworth and Emerson . . . I think it was Pascal who used the expression '*Cherchez en gemissant*' (Seek the truth with many sighs). Carlyle seized truth by the hair of the head and sought it with objurgations and imprecations." Bursts of applause thanked Mr. Morley as he concluded. Mr. Augustine Birrell Q. C., M. P., said that if he attempted to account for the phenomenon of Thomas Carlyle, he might hear a voice in the unmistakable accents of Annandale say, "Close thy wide mouth, blockhead, and cease to shriek." He concluded a very witty speech by declaring that in Chelsea, if genius be not appreciated, character is, and the character of Carlyle for kindness, independence of spirit, noble generosity and probity, is a name to be honored in all time. In proposing a vote of thanks to Mr. Morley, Mr. Frederic Harrison spoke of the great kindness with which he had been received at Mr. Carlyle's house.

Is Carlyle still read? Undoubtedly. In the People's Edition, first printed in 1872, five thousand copies a year have been sold of each of the most popular books. Inquiries made at public libraries show that there also he is read. At the Mitchell Library, Glasgow, his books are in such demand that they have been removed closer to the service-counter to facilitate delivery. In the Edinburgh Public Library four copies are kept of each of Carlyle's books and each copy is read twenty-five times in the course of every year.



MR. LONGFELLOW and his associates have undertaken a work,<sup>1</sup> the value of which to archaeologists, architects, students and tourists is almost incalculable. It is hardly necessary to say that nothing like a comprehensive survey of the architectural field covered in this book has hitherto existed in English. Many histories of architecture touch briefly on many of the buildings described, classifying them, of course, according to the periods to which they belong;

and there are many guide-books which mention the principal architectural objects of the localities most visited by travellers; but the "*Cyclopædia*" gives us far more than the histories and guide-books combined can furnish, analyzing with much skill and learning, pointing out features most worthy of the student's attention, and, especially, including in its view not only the most recently discovered architectural objects of Greece and the Levant, but buildings and monuments, sometimes of great importance, in places so far out of the route of the ordinary tourist that the existence of such objects of interest is known to comparatively few people.

For example, there are probably not many tourists who ever heard of a little town called Alba, or Alba, some sixty miles from Rome, on the ridge of the Apennines; yet this neglected little town contains what is not only in itself a curiosity — a pagan temple converted into a Christian basilica — but is one of the finest and most perfect examples in existence, outside of Rome, both of a temple and a basilica. This most interesting building is erected upon a Pelasgic substructure, dating, in all probability, at least as far back as the founding of Rome. The Pelasgic temple was, apparently, appropriated by the Sabines, and it was not until imperial times that it was utilized by a third race of men as a base for a temple to the gods of Rome. Which of the gods it was dedicated to is, apparently, unknown, but it was built in a good style, with fine Corinthian columns, which, although transposed in position, still remain in almost perfect preservation. Early in the fifth century this temple was converted into a Christian basilica. The *cella* walls were preserved, and the columns of the *pronaos*, together with others, brought from some neighboring building, utilized to form a three-aisled church, with no clerestory, the aisles being nearly as high as the nave. Although a new apse was built in the twelfth or thirteenth century, the church stands substantially as it was left nearly fourteen hundred years ago. Even the frescos with which it was decorated still, in part, remain, and the carved doors of sambuco wood, which were hung in the eleventh century, and have, therefore, been opened to the faithful for nearly nine hundred years, are still in service. The "*Cyclopædia*" gives a very pretty process plate of the interior of this most interesting building, mentioning also various other remains of antiquity, especially the extensive fortifications by which, as a frontier town in a commanding position, it was strengthened by its successive possessors; and we are inclined to think that the traveller or student in Italy would find few places of so much interest for his summer *villeggiatura* as this almost unknown town on the slopes of the Monte Velino.

The system of the work is that of a gazetteer; an arrangement which, if not intellectually imposing, is extremely convenient for the traveller and student; and usefulness to readers of these classes is, fortunately for them, placed above all other considerations throughout the book. The names of towns are placed in alphabetical order, and under each head is a succinct account of all the principal ancient architectural objects to be found in that town, the more interesting ones being illustrated by a large number of excellent photogravures and half-tone cuts. By this means, the architect or student who proposes a vacation tour in Southern Europe is enabled to plan his route beforehand, so as to see the things that he most cares for without searching vaguely for them after he arrives on the ground. Every tourist who wishes to study to some purpose knows the advantage of this sort of preliminary planning, in saving time. For instance, it is quite conceivable, to say the least, that a student or amateur might wish to devote a summer to the inspection of the archaeological work that has been done within the past few years. He probably knows, vaguely, that explorations have been made at Olympia, Orchomenos and Argos; and he may perhaps have heard of work at Eretria and Epidauros, and have seen a newspaper paragraph to the effect that excavation had been resumed at Ilion; but what has been found at these various places he does not know; nor can he tell where to ascertain anything about the matter. To wait for information until his arrival in Greece would be, at best, to waste a great deal of precious time after landing, in laying out his route to see what he wanted, and it is by no means certain that a tourist can ascertain, even in Greece, what he wishes to know. Here again, therefore, the "*Cyclopædia*" comes to his aid. The index of localities shows at once what towns of Greece and Asia are described; and on turning to their names, a concise, but sufficiently full account is found of everything of architectural interest to be found there. Delphi, Delos, Olympia, Orchomenos, Assos and Argos, Gergenti and Gortyna, — all the places, in fact, where important explorations have been made, down to 1894, are described, and, in many cases, maps of the excavations are given. Nothing could be more useful to any one with a tour of Greece in prospect; and the book can be used in the same way for Italy and Asia Minor, except that for Italy it has been necessary to leave certain portions of Rome to the guide-book makers, in order to have space enough for other matter not contained in the guide-books.

Although to Mr. Longfellow belongs the credit of having put the book into its present shape, besides conducting much of the laborious investigation of which it is the fruit, he could hardly have done all the work alone, and he has had able assistance. The late Thomas W. Ludlow undertook the Classical part of the book, and was able to carry it through, with the exception of the final revision of the proof-sheets, and the compilation of the bibliography, which has been supplied by Professor Harold M. Fowler. Mr. Charles A. Cummings

<sup>1</sup> "*A Cyclopædia of Works of Architecture in Italy, Greece and the Levant*": Edited by William P. Longfellow, Honorary Member and Late Fellow of the American Institute of Architects. New York: Charles Scribner's Sons, 1896. Edition limited to Five Hundred Copies. Price, \$25.00.

has finished the greater part of the articles on the Mediæval and later buildings of Italy; while some studies of the Gothic and Romanesque Italian churches are due to Professor A. L. Frothingham, Jr.

Admirable as this work is in form, matter and literary style, it is injured by the existence of two great defects — defects so obvious that it is extraordinary that publishers of the standing of the Messrs. Scribner should have allowed the book to appear in the market. Being conceived and arranged in "Gazetteer form," its value and practical usefulness suffer loss because the work is not accompanied by even the most rudimentary of geographical maps.

This deficiency, great as it is, is as nothing compared with the fact that this handsome and costly work has been published without an index.

It is often a great source of regret that so much of the very excellent material appearing in the current architectural publications is not put in more permanent shape. It is practically impossible for the architect to preserve all the journals which come to his table, nor would the reading-matter be available if kept in bulk. In order to be available the subject-matter must be classified and collated in distinct volumes. This is what has been done in the recently published work on "*Steam and Hot-Water Heating*,"<sup>1</sup> which is made up entirely of extracts from the pages of the *Engineering Record*, grouped according to subjects, and copiously illustrated. It is not a treatise upon steam and hot-water heating, but is rather a summary of existing practice illustrated by actual examples, and is so wide in its scope and so thorough in details that it cannot fail to be of great value to every constructor. Of course in so much miscellaneous matter there is a great deal which might be considered superfluous, and a great deal more which requires judgment in order to properly appreciate and apply. It seems a pity that a little more time was not spent on indexing. A thorough cross-index, arranged with reference to buildings as well as topics, would add greatly to the value of the book.

An eminent heating engineer recently made the remark, apropos of such works as the one under consideration, that they did not save much money for the architect or the client, but usually resulted in vastly increased fees for the specialist by inciting a false confidence in the minds of those who undertake to be their own engineer. In the light of the many examples quoted in this book, it seems so easy to successfully heat a complicated structure that the vital necessity for special advice is not very manifest. Architects can not know too much about steam heating; but, on the other hand, the architect who is wise will use such a work as this more as a guide to his judgment and appreciation of specialists' work than as a means of giving him a "short cut" to the solution of a heating problem. There is hardly a department of building engineering about which so many vague theories have been formulated without fear of contradiction, and concerning the results of which there is so wide a divergence of opinion as in steam and hot-water work, and this volume might easily mislead the young practitioner into overconfidence in his own judgment, whereas it is manifestly intended more to emphasize and elucidate the extraordinary problems which have been worked out by competent engineers in order to serve as guides in judging of similar work under different conditions. Nearly every problem presents different conditions and calls for different treatment. Those who are so fortunate as to be subscribers to the *Engineering Record* may have read in the weekly issues nearly all the contents of this book, but in its present systematic form it has an added reference value which will readily be appreciated.

ANOTHER work on the same subject,<sup>2</sup> though promising very well in the table of contents, seems to be of less value to the architect. An author who refers to the "art" of heating and claims to be the only writer on the subject since Peclet, can hardly raise great expectations. The book is a treatise on the theory and practice of heating and ventilating, but if the theory were more condensed and the subject matter were amplified and confirmed by the tangible facts of daily practice rather than by theories, the work could easily be made very serviceable, for it has a perfectly logical though confused basis. Any one who should study it carefully and understandingly could obtain a very clear and correct conception of the theory of heat, but might receive few impressions of how actually to heat a large building. Fortunately, however, the book throughout is not so dry as the introductory theoretical chapters. When dealing with the purely practical side of the question the author evinces a familiarity with the subject and a knowledge of the conditions which lead to many very valuable suggestions; and though we must differ very radically with some of his assumptions, the statements of final results are well worth study. Every architect is familiar with the commonly specified requirement of steam plants, that they shall heat the building to 70° in zero weather. Unfortunately zero weather comes very seldom in this part of the world for a period sufficient to thoroughly

test the plant; and in view of this contingency, the writer gives a table indicating the equivalent temperature other than 70° which would measure the efficiency of the heating apparatus for any specified condition, with the outside air ranging from 10° below to 100° above. There is also a very concisely written chapter on electric heating, constituting the first available published statement of this branch of the science which has come to our notice, as well as some carefully considered and thoroughly practical statements regarding heating by furnaces or by the aid of fans and indirect radiation. There is an almost total lack of illustration of, or reference to, executed work, but the intent of the book is thoroughly good, its principles are correct, even if somewhat obscured, and by careful revision and elimination of unnecessary scientific lumber its value could be made much more apparent.



#### ENGINEERS' CLUB OF PHILADELPHIA.

AT the annual meeting, January 18, 1896, eighty-seven members and visitors were present.

Mr. George S. Webster, retiring President, presented as his Annual Address, a paper reviewing the progress which had been made in the various branches of engineering during the year 1895, giving details of conspicuous examples of advanced practice. Statistics were given of the amount of railway construction during the year, and especially of the work done by the Pennsylvania Railroad Company and the Philadelphia & Reading Railroad Company. The increase in the speed of locomotives was commented upon, data of the best recorded runs being given. Progress in locomotive building was reviewed, and some conspicuous examples were described. The advancement in street-railway construction, especially the rapid substitution of electricity for other motive powers thereon, was noted; also the necessity of avoiding crossing steam railroads at grade, brought about by the increase of speed through cities, and the consequent work that has been done by the Pennsylvania Railroad Company to avoid such crossings in the principal cities through which it passes; while the construction of a subway and tunnel through the heart of Philadelphia for the abolition of grade crossings on the main line of the Philadelphia & Reading Railroad was described in detail.

Under transmission-of-power, the generation of electricity from water-power at Niagara, and its transmission from there to the City of Buffalo, was alluded to, and the suggestion to use the power which may be generated at the lower terminus of the Chicago Drainage Canal, at Lockport, also the plan to supply electricity at Salt Lake City from Big Cottonwood Creek, about fourteen miles away, were spoken of. It is believed that the difficulties of transmitting power in the form of electric current are being rapidly overcome, so that in the near future we may expect, by this means, the transmission of a great force to distant points for utilization.

Ship-building was next considered, and the statement made that the product of American ship-building during the last year has been a convincing demonstration of the capacity of America to efficiently build ships of any style and type, either mercantile or naval, that any nation may require. The vessels and machinery built at our great shipyards on the Delaware were described in considerable detail, and the character of the representative vessels from the different nations assembled at the opening of the Baltic Canal was commented upon.

In bridge construction long and heavy structures across the wide rivers have become usual occurrences. Among important structures completed during the past year, Mr. Webster cited the bridge over the Missouri River, at Sioux City, the Louisville and Jeffersonville bridge, the steel arch bridge now under construction across the Niagara River, to have a span of eight hundred and forty feet, the double-track railroad bridge nearing completion across the Delaware River, and the highway bridge recently completed by this city across the Schuylkill River at the Falls.

High buildings were then touched upon, and the erection of thirteen and one-half stories of the ironwork for the Fisher Building, in Chicago, in fourteen days was cited as the record for rapid construction.

Probably as an outgrowth of the convention of the International Deep Waterway Association, the President of this country has appointed a Deep Waterway Commission, to confer with a similar body appointed by Great Britain or Canada, as to the feasibility of constructing a waterway capable of transporting ocean steamers from the Great Lakes to the Atlantic. Mention was made of the intention to utilize, together with the Illinois and Mississippi Rivers, the main drainage canal of the sanitary district of Chicago, from the south channel of the Chicago River to Lockport, as a free ship channel navigable for boats of twenty-two feet draught. The cross-section of this canal is greater than that of either the Suez, Manchester or North Sea canals. From the report of the Nicaragua Canal Commission recently published, it appears that new and exhaustive surveys are considered necessary before sufficient data will be at hand to make any conclusive estimates and reports upon the final location. The report practically condemns the present

<sup>1</sup> "*American Steam and Hot-Water Heating Practice*." From the *Engineering Record*. Being a selected reprint of descriptive articles, questions and answers. With five hundred and eighty-five illustrations. New York: The *Engineering Record*, 1895.

<sup>2</sup> "*Heating and Ventilating Buildings*." An Elementary Treatise. By Rolla C. Carpenter, M. S., C. E., M. M. E., Professor Experimental Engineering, Cornell University. New York: John Wiley & Sons. London: Chapman & Hall, Limited, 1895.

location from Greyton to Brito, or, at least, suggests many marked departures from the plan proposed, and increases the estimated cost of the canal to nearly twice as much as the Company's figures. Projected work on the deepening of the Erie and Oswego Canal, the deepening of the Champlain Canal, and the construction of a canal from Pittsburgh to Lake Erie were briefly described, and the work which has been done in deepening and rectifying the channel in the Delaware and Schuylkill Rivers at Philadelphia was explained in considerable detail.

The increased responsibility which now rests upon the engineer, on account of the increase in the magnitude of the work in almost all branches of the profession, makes it necessary that systematic engineering inspection should be exercised in all important contracts. The engineer can no longer afford to isolate himself from his brothers in the profession, but must constantly keep in touch with what others are doing by comparing methods and results; and in order that intelligent comparisons may be made, it is absolutely necessary to establish uniform methods of determining the strength and other properties of materials and the efficiency of mechanical work. Some important tests have been made by the United States Government at Watertown, and by the National Societies of Mechanical, Civil and Mining Engineers. Most of our larger institutions of learning have established physical laboratories as necessary adjuncts to their technical schools. More complete data, however, are still needed regarding the composition of good preservatives for iron and steel in building construction, and for the proper composition and quality of material entering into all classes of municipal work, electrical and other causes of underground deterioration.

The field of the engineer has, within the past few years, assumed such vast proportions, that the individual engineer has necessarily become a specialist, yet he is frequently called upon to design and execute works of magnitude which require special knowledge in a number of branches, and in order to utilize to advantage the rapidly accumulating information which is at hand, he must have a full knowledge of the conditions under which this information was obtained. The engineering society affords that opportunity, and opens the door to a free interchange of ideas and experience.

The Secretary announced the death of active member Mr. John B. Fontaine, on January 6th, and, upon motion, the President appointed a committee to prepare a suitable memorial.

The Committee of Tellers reported that one hundred and sixty-two legal votes were cast, and stated the number received by each candidate. The report was accepted, and the President declared the following, having received the highest number of votes, elected: A. Falkenau, *President*; Carl Hering, *Vice-President*; George T. Gwilliam, *Treasurer*; L. F. Rondinella, *Secretary*; Max Livingston, Joseph T. Richards, L. Y. Schermerhorn, *Directors*.

The new President, Mr. A. Falkenau, took the chair, and made a short and appropriate address. He stated that after eight years' membership in the Club, there was no place in Philadelphia where he felt more at home. Its influence on the development and on the individuality of its members as broad engineers he considered very powerful, and the opportunity which it affords for social contact and knowledge of a different side of human nature from that exhibited in the course of business, is mutually helpful. In this combination of social and scientific purposes its function is wider than that of the national societies, and of consequently greater personal benefit. The information obtained in casual conversation is often quite as valuable as that which comes from the formal reading of papers, and the advantage to younger men of hearing the results of the wider experience of those older in the profession is very great. Through this improvement of its individual members, the Club also exercises an important influence on the community at large. It has already gained large proportions, and is capable of still greater development if every member will do his share to help as he is able.

Mr. Falkenau expressed the honor which he felt in being elected to the presidency of the Club, and in promising to devote his best efforts to further its interests, he asked the coöperation and help of every member.

The meeting then adjourned to lunch.

L. F. RONDINELLA, *Secretary*.

#### SKETCH-CLUB OF NEW YORK.

THE regular monthly dinner and annual meeting of the Sketch-Club of New York was held on Saturday evening, February 1st. Over forty members sat down to dinner.

After dinner the reports of retiring officers were read and accepted. They showed the Club to be in good condition both as to its membership and financial standing. On the strength of these reports it was decided that the Executive Committee should at their discretion secure more commodious quarters in the building now occupied by the Club.

The following officers were elected for the ensuing year: *President*, Mr. J. Oliver Cummings; *Vice-President*, Mr. Robert T. Sconce; *Recording Secretary*, Mr. Harry P. Knowles; *Corresponding Secretary*, Mr. George Mort. Pollard; *Treasurer*, Mr. Edw. L. Ellis; *Chairman House Committee*, Mr. E. Wilbur Gayle; *Chairman Entertainment Committee*, Mr. H. C. Pittman.

The following gentlemen were elected to the *Advisory Board*: Mr. John M. Carrère, Mr. John Duncan, Prof. A. D. F. Hamlin, Mr. Bruce Price, Mr. John Galen Howard and Mr. W. T. Partridge.

The President, Mr. J. Oliver Cummings, is *ex officio* a member of the Advisory Board.

Adequate accommodations having been secured, classes in various subjects will be immediately established, and such other educational methods adopted as may be deemed advisable by the Advisory Board.

The outlook for the coming year is propitious and large accessions are expected to the active membership. ALFRED F. EVANS.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE LADIES' DINING-ROOM: METROPOLITAN CLUB-HOUSE, FIFTH AVE. AND SIXTIETH ST., NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print issued with the International and Imperial Editions only.]

THREE HOUSES ON EIGHTY-SECOND ST. AND ELEVENTH AVE., BAY RIDGE, N. Y., FOR MESSRS. WALKER JOHNSON AND ALBERT E. PARFITT. MR. ALBERT E. PARFITT [OF PARFITT BROS.], ARCHITECT, BROOKLYN, N. Y.

THIS is the first of a series of houses to cover a beautiful hill-top, looking over Lower New York Bay and the Narrows, with an idea of carefully preserving the natural curvature of the ground and its trees. The area to be so improved comprises about thirty acres and it is hoped to be an object-lesson to the speculators around who work so much devastation with beautiful spots.

ALTAR FOR THE INDUSTRIAL SCHOOL, NEWTON, MASS. MESSRS. W. H. & J. A. MCGINTY, ARCHITECTS, BOSTON, MASS.

THE altar was built for a temporary chapel composed of two floors of one of the wings of the building. One of the girders, which were built in, passes over the centre of the cornice, therefore not allowing of a greater height in the middle.

PROPOSED HOUSE, CHICOPEE FALLS, MASS. MR. GUY KIRKHAM, ARCHITECT, SPRINGFIELD, MASS.

THE "DUNSTER" DORMITORY FOR J. A. LITTLE, ESQ., CAMBRIDGE, MASS. MESSRS. LITTLE, BROWN & MOORE, ARCHITECTS, BOSTON, MASS.

HOUSE FOR ARTHUR WALLACE POPE, ESQ., WELLESLEY, MASS. MR. H. M. STEPHENSON, ARCHITECT, BOSTON, MASS.

A COUNTRY RESIDENCE. MR. H. M. STEPHENSON, ARCHITECT, BOSTON, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

A GENERAL VIEW OF FRANKFORT.

A GROUP OF STREET DOORWAYS.

WROUGHT-IRON TOMB GATES, HIRSCHBERG, SILESIA.

SGRAFFITO DECORATION, VIA DI S. MATTEO IN MERULANA, ROME.

[Additional Illustrations in the International Edition.]

THE DINING-ROOM: METROPOLITAN CLUB-HOUSE, FIFTH AVE. AND SIXTIETH ST., NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

FIREPLACE IN THE SAME ROOM.

[Gelatine Print.]

BILLIARD-ROOM IN THE SAME CLUB-HOUSE.

[Gelatine Print.]

THE ARAB HALL: HOUSE OF THE LATE LORD FREDERIC LEIGHTON, HOLLAND PARK ROAD, LONDON, ENG. PROF. GEORGE AITCHISON, ARCHITECT.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

### FIRE-STOPS IN COMBUSTIBLE BUILDINGS.

BOSTON, MASS., January 26, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—The following extract from a letter just received may be of interest:

"Gentlemen, your letter of inquiry received. In reply will say we had a fire on the 20th, about 10.20 P. M. It was discovered in the cellar of No. 2 store, evidently caused by gas, which burned one and a half hours with a stream of gas from a two-inch pipe to feed it. It could make no headway as the stops in the building prevented communication with the upper stories. . . . In twenty minutes from the time I had the gas-main shut off in the street, the fire was all out and we began opening the ventilators, etc., and got the smoke out as well as we could. It has done no damage above the second story. . . . The elevator was not injured, and we have only one tenant out of the building temporarily."

The building referred to is the Masonic Building, in Dover, N. H., erected by us about four years ago. It is six stories in height with stores at the street level, three stories of offices over these, and Masonic apartments above. Most of the partitions and all of the floors are wood framed, and the walls furred in the old way; but the building is fire-stopped throughout in the most thorough manner. The result in this case shows that with proper care, fire can be prevented from spreading through a combustible building.

Truly yours, HARTWELL, RICHARDSON & DRIVER.



BOSTON, MASS.—Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt: at the Museum of Fine Arts.

Paintings from the Paris Salons of 1895: at the Jordan Art Gallery, 450 Washington St.

Fifty-third Exhibition, Oil-paintings and Sculpture: at the Boston Art Club, January 13 to February 15.

Pictures by Childe Hassam: at the St. Botolph Club, January 27 to February 15.

Photographic Views lent by Walter G. Chase, and Flash-light Studies by Miss Bertha Lothrop: at the Boston Camera Club, 50 Bromfield St., February 5 to 15.

F. Hopkinson Smith's Water-colors of Constantinople, Holland and Venice: at Doll & Richards's Gallery, 2 Park St., until February 12.

BRIDGEPORT, CONN.—Second Annual Exhibition of Pictures: at the Public Library, January 25 to March 15.

CHICAGO, ILL.—Works by Gustave Doré: January 21 to March 22, Swedish Paintings: February 4 to March 1, at the Art Institute.

CLEVELAND, O.—Joint Exhibition of the Cleveland Art Association and the Cleveland Architectural Club: at the Garfield Building, opens February 10.

NEW YORK, N. Y.—Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures: at the Metropolitan Museum of Art.

Derbyshire Pictures by Robert W. Van Boskerck: at Knoedler's Gallery, 34th St. and Fifth Ave., January 18 to February 14.

Drawings and Water-colors by George Wharton Edwards: at Keppel's Gallery, 20 East 16th St., January 27 to February 8.

Twenty-ninth Annual Exhibition of the American Water-color Society: at the National Academy of Design, February 3 to 29.

Eleventh Annual Exhibition of the Architectural League: at 215 West 57th St., February 15 to March 7.

Portraits and Pictures by R. W. Vonnoh: at the Durand-Ruel Galleries, 389 Fifth Ave., February 3 to 15.

Symbolistic Paintings by P. Marcus-Simons: at the Avery Galleries, 368 Fifth Ave., February 7 to 22.

PHILADELPHIA, PA.—Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts: opens December 23, closes February 22.

PROVIDENCE, R. I.—Water-colors by Ross Turner: at the Rhode Island School of Design, February 8 to 22.

SPRINGFIELD, MASS.—Nineteenth Annual Exhibition of Paintings: at James D. Gill's Gallery, opened January 31.

ST. LOUIS, MO.—Drawings of London Society, by George Du Maurier: at the Museum of Fine Arts, until February 22.



CAHOBA.—The name of Aaron Burr chancing to be mentioned in conversation with W. A. Hawley, a young lawyer of Selma, Ala., he said: "Speaking of Burr reminds me of a visit I made a few days ago to Cahoba, the old-time capital of Alabama, where Burr spent considerable time, and where he built a handsome residence, perhaps the finest in the place, unless the one owned by William L. Yancy was superior to it. When railroads began to be built Cahoba did not remain the capital of the State very long, and one by one the families that had made the place famous for fashion, hospitality and learning moved away, and when I saw it a few days ago it was a cotton field, with here and there the remains of an old brick chimney—not a house is left standing; even the cemetery has been removed or trampled down until all traces of it are obliterated."—*Washington Star*.

A PROPHECY CONCERNING A SECOND GREEK EMPIRE.—To-day King George is one of the wealthiest princes in Christendom. He has erected quietly and without attracting much attention a superb palace for himself about fifteen miles out from Copenhagen and it is thither that for some time past he has been quietly transferring all his treasures and favorite belongings from Athens. It is ready for occupancy, and now that King George knows that he is a doomed man, afflicted with an incurable disease, and unable even under the most favorable circumstances to live very much longer, his abdication may be at any time expected. His son, the Duke of Sparta, is far more popular with the Greeks. He belongs to the national Orthodox Church, instead of being a Lutheran like King George. He does not care for money, is full of military aspirations, as fond of action as his father is the reverse, and his head is full of the national dreams of the revival of all the former grandeur and glory of Greece. There is an ancient proverb in Greece to the effect that under and during the reign of a Constantine and of a Sophia the ancient Greek Empire shall be called into life again and the Cross restored to the dome of St. Sophia at Constantinople in lieu of the Mohamedan crescent, by which that venerable fane is now surmounted. Now strangely enough, the Crown Prince's name is Constantine, his Consort's name is Sophia. By marriage he has become a grandson of Queen Victoria, a brother-in-law of the Emperor of Germany, while not only is his mother one of the most patriotic daughters of the Imperial House of Romanoff, but he himself is, through his father, a brother of the widowed Czarina, a first cousin of the young Emperor Nicholas II of Russia. It is not, therefore, so very improbable that when the time comes for the Turk to be bundled bag and baggage out of Europe, the Powers should pitch upon Constantine of Greece as the most suitable person in every respect to succeed the Sultan at Constantinople, which international jealousies would prevent any of the Great Powers from retaining in their own hands.—*Marquise de Fontenoy in the Philadelphia Press*.

SUPERSTITION IN BUILDING.—"Out on the Saratoga road, about six miles west from San José, workmen are sawing and hammering in the work of constructing another turret on the Winchester mansion, which is beautifully situated on a pretty farm of 100 acres, mainly set in fruit. The structure is the home of Mrs. Winchester, widow of the inventor of the Winchester rifle. Ten years ago," says a writer in the *San Francisco Examiner*, "the handsome residence was apparently ready for occupancy, but improvements and additions are constantly being made, for the reason, it is said, that the owner of the house believes that when it is entirely completed she will die. This superstition has resulted in the construction of a mass of domes, turrets, cupolas and towers, covering territory enough for a castle. Although no part of the structure is over two stories high, the house is large enough to shelter an army. The house stands in the midst of a large and extremely beautiful lawn. Fountains throw their spray over figures that seem almost human. Beautiful flowers grow everywhere; roses, lilies, trees, vines, pampas grass and rare plants of every description help to make a magnificent setting for the buildings, which resemble an old German castle with its surrounding strongholds. There are many buildings beside the house, and they, too, show the effects of the owner's odd belief. Summer-houses and conservatories are made with the most picturesque of pinnacles, and there are many unexpected niches where groups of statuary are hidden. Even the barns and granaries are built in L's and T's, which suggest that they were made in parts and are ready at any time to have the work continued. The first view of the house fills one with surprise. You mechanically rub your eyes to assure yourself that the number of turrets is not an illusion, they are so fantastic and dream-like. But nearer approach reveals others and others, and still others. How it is possible to build on an already apparently finished house and preserve its artistic appearance through so many changes is a query that nobody can answer, but the fact remains that it has been done. From every point-of-view new towers appear, and one has to make a circuit of the building to see all of them, for every addition, of the many that have been made, has one or more separate roofs, and every roof is elongated into a tower or rounded into a dome. Not every one erected is sure to remain, though. The main cupola was pulled down and rebuilt sixteen times before it pleased the taste of the owner and was allowed to stay. As fast as new rooms are finished—and they are all made with the very latest and most modern of accessories—they are furnished with the utmost elegance and closed, to be used hardly at all. Mrs. Winchester and her niece live alone in the great residence, and its doors are closed to all but a favored few. The tap, tap, tap of the carpenters' hammers never disturbs them in their cosy and luxurious quarters, which are as far removed from the sound as if it were somebody else's house that is being built. Mrs. Winchester in appearance is attractive and scarcely beyond the prime of life. In business she is shrewd, and socially very exclusive."



Entered at the Post-Office at Boston as second-class matter.

FEBRUARY 15, 1896.


**SUMMARY:—**

A Successful English Suit for Seven-and-a-half per cent Commission.—The Proper Way to present such a Case to the Jury.—The Institute Schedule.— <i>Der Kunst-Gewerbe-Gehilfe</i> .—The Genesis of Painting on Glass.—The Ionic Volute.—The Paris Exhibition of 1900.—Mr. Hunt's Successor in the Académie des Beaux-Arts.—The New Cathedral for Washington.—The <i>Oesterreichische Monatschrift</i> . . . . .	69
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**A** FIRM of architects in London recently sued for a commission of seven-and-one-half per cent on the cost of certain alterations carried out under their charge. Their case seems to have been well managed, their counsel, instead of merely quoting the Royal Institute schedule, and staking the result on the reception that this might meet with from the judge or jury, having brought forward independent evidence that the charge was proper and just; and they won their suit without difficulty. The total cost of the work was less than five hundred pounds. Two witnesses testified that, for work costing less than five hundred pounds, the customary fee paid to the architect was seven-and-one-half per cent, which was increased to ten per cent when the cost was not more than one hundred pounds; and they testified further that, where alterations are to be made in buildings while business is being carried on in them, the work and responsibility of the architect and builder are much increased. They thought that, in the present instance, the commission claimed was very moderate. It was further shown that the plaintiffs had prepared several extra plans, and had measured the old buildings, without any extra charge; and the jury, convinced that the plaintiffs had earned what they asked, gave them a verdict for the full amount, with interest and costs.

**S**IMPLE as this case seems, it is worth studying as an example of how architects' claims should be presented. There is no doubt that architects earn all the pay that the custom of the profession allows them, but, if they have to sue for it, they often lose a large part of it, through their own or, occasionally, their attorney's, inexperience in such matters. Most architects have a blind faith in the Institute schedule, and imagine that it is only necessary to exhibit a copy of this document in court to have judgment entered forthwith for compensation according to its terms; and some lawyers, little versed in building matters, share this delusion. For people who cherish such notions it is a rude shock to learn, as many of them do, that very few judges admit the Institute schedule at all as evidence in cases tried in their courts. If it is claimed that the plaintiff read the schedule to his client, before the latter concluded his agreement with him, or that the plaintiff sent him a copy of it, or had an abstract of it printed at the top of his letter-sheets, or if it is claimed that, in some other way the client had read and understood the schedule, before

he contracted with the architect, and knew that his transactions with the latter would, in the absence of special stipulations, be governed by it, then the schedule can be read in court, as a part of the agreement between the parties; but that the client should, as a matter of common knowledge, be familiar with the Institute schedule, or that he ought to be bound by a tariff which he had never heard of, drawn up among themselves by members of a profession to which he did not belong, judges, as a rule, refuse to admit, and often exclude the evidence of the schedule altogether, as being irrelevant to the question of what was the real contract between the parties. For this reason, advocates experienced in building cases never try to force the schedule upon a court, unless it is claimed that both parties understood that it formed a part of their agreement. If the jury finds that this claim is substantiated, the schedule will be enforced, just as any other terms would be enforced to which it could be ascertained that the parties had bound themselves; but the schedule would in the case be enforced simply as a part of an agreement, and not as a code having any innate authority.

**A**LTHOUGH the schedule has no authority in law, as the rule adopted among themselves by a certain set of professional men, it may have, and does have, a certain authority, not as a schedule, or code, but as furnishing evidence of what are fair and reasonable charges for architects to make under various circumstances; and in this light it may be consulted by a court, or certain of its clauses admitted as evidence; but, it must be remembered, as evidence which may be contradicted by the testimony of other witnesses, or confirmed in the same way. Thus, the statement of the schedule, that five per cent is the proper and usual architect's fee for services on new buildings, is so constantly confirmed by people who have had business with architects, and by architects themselves, that it is generally accepted without question by courts, as well as by the public; but the rule which was once included in it, that one per cent on the proposed cost was a proper compensation for preliminary sketches, has been almost always rejected, for the reason that plenty of architects and other witnesses could be found to testify that small pencil studies, dignified by the rather elastic name of preliminary sketches, were not worth, in many cases, the one-per-cent fee. The essential element of the evidence which should be brought forward in an architect's behalf is, therefore, not authority, or official character, but reasonableness. He cannot expect to collect a certain fee simply because the schedule says that he ought to have it; and he should not, in his own interest, try to do so; for the jury are quite aware of the fact that they alone are entitled to say what compensation he should recover, and an attempt to impose schedules on them is more likely to arouse their resentment than their favor. It is otherwise if the schedule is so used as to appear simply as a confirmation of the testimony of witnesses whom the jury respect. If half a dozen well-known and respected architects and builders testify, for example, that ten per cent is a proper charge for designing and supervising the execution of a monument, the jury will be disposed to believe them, notwithstanding the evidence of people who are willing to do the work for less; and, at the end, the schedule may, perhaps, be quoted, with good effect, to show that all respectable architects expect to be paid on this scale; while a simple demand for ten per cent for doing what the average jurymen supposes to be a particularly simple and easy piece of work, fortified only by the exhibition of a printed document, which neither defendant, judge nor jury have ever seen before, purporting to emanate from a body of which none of them have ever heard, will be tolerably sure of rejection.

**W**E have much pleasure in welcoming to the field of technical journalism a handsome periodical, published, at intervals of twenty to twenty-four days, so as to include twenty numbers in the year's series, by E. Grossman, in Stuttgart, Germany, at the very moderate price of three marks, or seventy-two cents, per quarter-year, for foreign subscribers. Our readers should remember the name of this journal, which is called *Der Kunst-Gewerbe-Gehilfe*, and, besides being the established organ of the Association of German Art-Workers, is intended to be devoted to the higher interests of the

professions to which it appeals. That its purposes in this respect will be ably and earnestly fulfilled, the introductory number certainly indicates. The first important article is an interesting study of the fundamental ideas of form; and this is followed by one on the importance to art-workers of a comparative knowledge of artistic forms, by Professor von Feldegg, of Vienna, who introduces his essay by quoting an expression of Liebig, who once said that "A person who knows nothing of chemistry does not even know that"; and continues by showing the value of the resources with which a wide knowledge of the arts supplies the artisan, and the effect of general study in forming the taste. In Professor Feldegg's opinion, all the arts spring from a common root, and he promises to show the stock from which they have all proceeded, and to analyze the relations of the different branches, in what promises to be a valuable series of papers.

**T**URNING to the more practical part of the new journal, we find, under the heading of Furniture and Wood-Carving, some good drawings of an extremely pretty selection of articles of furniture, in various styles; and the Department of Decorative Painting is likewise furnished with a half-tone reproduction of a fine piece of glass-painting from Bologna. Under this heading, Professor Sepp, of Munich, begins a curious account of early glass-painting. According to him, the earliest known undoubted reference to painted-glass windows is to be found in a letter written by Gozbert, abbot of the convent of Tegernsee, in Bavaria, to his Highness, or Sua Celsitudo, as the abbot calls him, Count A—. The rest of the name is lost, but the letter was probably written to a certain Count Arnold von Vohburg, or Vogaburg, whose ancestral estates joined those of the abbot, who was himself born Count of Kehlheim and Essing. The latter speaks further of the death of "the noble Adelheid;" and as Arnold's wife was Adelheid von Ammerthal, daughter of the Margrave of Nordgau, it seems tolerably certain that this friend and neighbor was the "Count A—" to whom the letter was addressed. It seems that, perhaps in memory of the deceased Adelheid, the Count A— had presented to the convent church a painted-glass window; and a considerable part of the letter is devoted to praising the window, and thanking the donor for it. "You have," says the reverend abbot, "brought our place into such honor as was never known before, and such as we never dreamed of attaining. The windows of our church were until now closed with old cloths. Now, for the first time, the golden-haired sun throws its rays through many-colored glass-paintings upon the pavement of our basilica." "Where," he goes on to inquire, "in all the world is there a place so beautifully ornamented?" "The hearts of all beholders tremble with a thousand delights, when they gaze upon the novel work."

**I**T is known that Count Gozbert was elected Abbot of Tegernsee in the year 983, and died in 1001. Arnold von Vohburg is known to have lived at the same time; so that the window spoken of in the letter must have been set in the church about a thousand years ago. It was not the first work of its kind, for Gozbert himself speaks elsewhere of having learned the art of glass-painting from the monks of St. Emeram, in Ratisbon; but it seems to have been the first of which a detailed account has come down to us. Gozbert put the admiration and curiosity of the people of Tegernsee to good account, and soon had a little shop established, where the white quartz sand brought down by the torrent of the Weissach, near by, was converted into glass of different colors. The reputation of the place soon spread, so that the Bishop of Freisingen, and the Abbess of Chiemsee, are recorded as having given orders for windows about the beginning of the eleventh century; and even to this day, bits of green and blue and red glass are picked up in the ash-heaps, which mark the site of Abbot Gozbert's shop. The original window, to which the new manufacture owed its inspiration, was destroyed by fire, with a large part of the convent, in the year 1036; and the monks were so distressed at their loss that they deposed their abbot, Ellinger, for not being able to prevent the catastrophe.

**M**R. DANIEL WOOD writes to the *Builder* an interesting letter on the way in which the Ionic volute was drawn. It has been the fashion to suppose that all Greek curves were drawn freehand, by a sort of superhuman

inspiration; but Mr. Wood says that nearly all Ionic capitals in Greece have a small hole in the centre of the eye of the volute, in which, as he thinks, was set the point of a cone. Around this cone was wound a string, to the end of which was tied a pencil, either directly or through the medium of a flat stick, through a hole in which the pencil was thrust; and, as the string unwound from the cone, the pencil described a volute. He says that with this arrangement he has followed exactly the curve of the volute of existing capitals, and that, as the hole for the point of the cone is found at Mycenæ, at Priene, and in the temple of Niké Apteros, at Athens, he thinks such an instrument was generally used. At Ephesus, the Ionic capitals do not show any arrangement for holding the cone, and he thinks it was probably held in a separate frame.

**T**HE Paris Exposition of 1900 has to develop under considerable difficulties. There has always been a strong party in the Chamber of Deputies, formed particularly from the Provincial members, not only opposed to the present project, but opposed to any sort of exposition in Paris. This party has probably a majority of the house, and, while it would hardly venture now to suppress the scheme entirely, it can, and does, occasionally avail itself of opportunities for throwing obstacles in its way. Its last proceeding in this direction is to forbid the use of any part of the Champs Elysées for the exhibition, to interdict the removal or rebuilding of the Palais de l'Industrie, and to direct that all the exhibition buildings shall be confined to the left bank of the Seine. This decree upsets completely the fine plans for a monumental bridge, extending from one grand cluster of palaces on the right bank, to another on the left, and restricts the exhibition within a smaller space than was occupied by that of 1889. The Municipal Council of Paris is said to be also disaffected toward the Exposition, and, in its plans for a Metropolitan Railway, carefully avoids arranging for any accommodation for visitors to it.

**I**T is a matter of some interest to know that the Section of Fine Arts of the Institute of France has elected, as Foreign Associate, in the place of the late Richard Morris Hunt, the distinguished German painter, Adolph Menzel. This leaves only one foreign architect-member of the Institute, the venerable da Silva, of Lisbon, who, although he is eighty-nine years old, still retains his interest in his profession and the arts, and has already signified his intention of being present at the meeting to be held next October, to commemorate the one-hundredth anniversary of the foundation of the Institute.

**T**HE District of Columbia is to have a fine Episcopal Cathedral, designed by Mr. Ernest Flagg, of New York. By desire of the Trustees, two designs were prepared, one in Gothic and the other in Renaissance style, and the Renaissance design was chosen. The building, as planned, is to be two hundred and seventy-two feet long, and two hundred feet wide, and is to have a dome two hundred and eighty feet high, and four towers, each three hundred and twelve feet high. It is expected that the church will cost nearly three million dollars, and about a million more is to be expended upon a Bishop's palace, a deanery, a boys' and girls' school, a chapter-house and other buildings, which will form a part of the group. Mr. Flagg certainly has a fine opportunity, and the whole profession will be interested in his success.

**T**HE second year of the *Oesterreichische Monatschrift für den öffentlichen Baudienst* (Austrian Monthly Record of Public Building-Service) begins under new auspices, the publication having been transferred to the house of R. von Waldheim, Taborstrasse 52, Vienna. Although this is an official journal, prepared, to a certain extent, in the Imperial Ministry of the Interior, it contains a good deal of technical matter of interest, and it is curious that a large part of this refers to American work. One of the New York "skyscrapers" is illustrated and described, Mr. von Emperger's paper, read before the American Society of Civil Engineers, at Nantasket Beach, is translated, with illustrations, and several items are quoted, with due credit, from the *Electrical World*, the *Iron Age*, and other American journals; and Carson's well-known excavating apparatus is shown in a page of plates.

## EVERY-DAY ITALY.—I.

TURIN, GENOA, SIENA.



In Via della Sperandie, Siena.

were nearly all of them women, of different ages and degrees of comeliness—or homeliness, to be less flattering and more exact—members of one spiritual household, from some obscure Illinois town. They were accompanied by their “pastor” and another younger man, who, for the sake of dramatic unity, I choose to believe was the superintendent of the Sunday-school; and they were “conducted” by a polyglot guide, from whom every sort of treatment drew only the same unvarying politeness expressed in labored but courtly English.

The minister was really the shepherd of his flock, and toward him all the others manifested a lamb-like trust and devotion. They accepted his pompous commonplaces as so much distilled wisdom, and laughed at his pleasantries as we have all laughed at our teachers’ thread-bare jokes at school. He was a man of forty or thereabout, well and sturdily built, like a farmer, but with the “soldier’s eye,” and the high, whining now-my-little-children voice, so common among American ministers in rural communities. He wore ill-fitting black clothes of a clerical cut, and a soft, broad-brimmed hat, in which a Sherlock Holmes would, perhaps, have recognized his prairie origin. His thick, black beard had enabled

MY first impressions of Italy proved to be rather impressions of America, for at Modane, the frontier station, I was aroused out of a sort of waking sleep, which had continued fitfully ever since we quitted Paris, by the entrance of a party of American tourists, members of some educational excursion on their way from Switzerland to Rome—“The Eternal City,” as the small but enthusiastic guide-book, with which each was provided, was happily inspired to call it. They

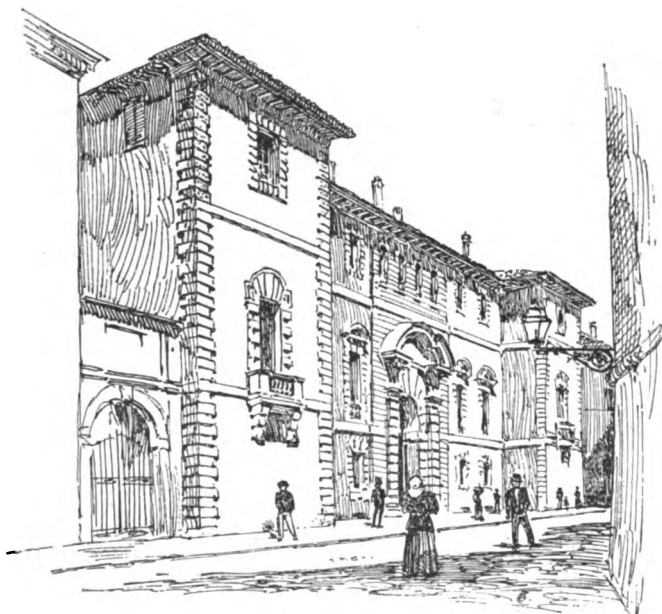
a shock of carroty hair, which tumbled in fine disarray from under a rakish and beribboned straw hat. He had shifting gray eyes fringed with white lashes, and a complexion of that freckled whiteness peculiar to red-headed people. His clothes were also



A Hot Day, Bologna.

black, but their sobriety was greatly tempered by a gaily-colored garment—a happy compromise between a bath-robe and an outing-shirt—which was confined at the waist by a broad sash, and at the neck by a red cord terminating in fluffy balls of green, which dangled coquettishly about under his chin. He was very nervous, eager and excitable, and rushed often from one compartment to another to ask the ladies, individually and by name, how they were getting on, or to point out to them some feature of the passing landscape.

It was curious and even pathetic to observe how closely these people clutched their own individualities, and clung to the facts of their common home life amid strange scenes and alien peoples. It was the morning after the Fourth of July, and they had all been up late the night before “celebrating”—telling the Alps their patriotism with guns and fireworks. This they did, it appeared, not for the pleasure they found in it, but as their duty as loyal Americans.



Palace in Bologna.



In the Piazza San Martino, Bologna.

him to forego the necessity of a collar, and for further comfort and protection he had tucked a black silk handkerchief about his neck. So attired, he presented an altogether funereal aspect in great contrast to his more youthful companion. Him Nature had provided with

They relieved the monotony of the early morning hours by singing Gospel Hymns and discussing mooted points in the Old Testament, which had been raised, perhaps, in some past prayer-meeting. They gossiped about their friends and neighbors as interestedly and

familiarly as though they still sat about one another's tea-tables, and in all ways renewed and treasured up the memory of their far-off prairie home. They were by no means indifferent to their surroundings, notwithstanding, nor to the wonderful scenery through



Palazzo Zatti, Ferrara.

again into their journals, or to embody in letters to their friends at home. After the first hour or so of this exercise I fancied it was pursued with a more and more flagging interest, somewhat in the spirit of a man who continues to eat after he has satisfied his hunger, solely because the meal has been paid for. They had paid for their "culture" in advance, and seemed resolved to get the worth of their money.

Thus it happens that my early memories of Italy are so mixed with others alien to them. The pictorial Alps, the world-old cities clinging to their sides and resting in their valleys, the brown beauty of the people with their passionate eyes, their gay costumes and the soft accents of their speech are mingled in my mind with visions of the far, bleak prairie, where houses, like lost things, huddle together into villages for warmth and comfort; of gaunt meeting-houses and grim black-coated elders with high, nasal voices; of pale, patient women's faces and meekly folded hands.

I do not know how Turin seems to others, or how it would appear to me to go back to it again, but the impression I retain is of a toy city — a Noah's-ark sort of a place, where the buildings seem cut out of cardboard with the windows painted on, and one is afraid of leaning against a tree for fear of knocking it over. The people, somehow, only intensified the notion. They seemed like *marionettes*, uncommonly supple in the joints. The palace gates would open amid a blare of trumpets, and a band of red and blue soldiers march out with a clock-work regularity of movement, and disappear under some archway, just as they used to in the mechanical toy village I once saw exhibited when a boy; and in the band which played at evening in the palace yard I heard again, in imagination, the squeaking hand-organ which accompanied the performance.

Turin is really a very pompous, formal, architecturally correct little town, situated in the midst of a great plain, with wide wind-swept streets and squares in which there never seem enough people. The only thing that impressed me with a sense of something *living* was that which had been dead the longest — the old Castello, in the very heart of the city, with its red brick mediæval towers rising out of the dark-green foliage at their base, and hundreds of birds circling about their summits.

In Genoa, first, I found the Italy of my dreams — the sumptuous churches, the marble palaces, the houses climbing one above another in picturesque confusion; the thronged streets and squares, gay with color and alive with movement and, all about, the vine-clad hills, villa-crowned. No other city in Italy, not even Venice, rivals Genoa

in picturesqueness, for she has the double charm of the hills and of the sea, and it is difficult to declare which is finer, the view from the heights looking seaward, or of the city and mountains from the harbor. Fresh from New York and Chicago, I was not prepared to



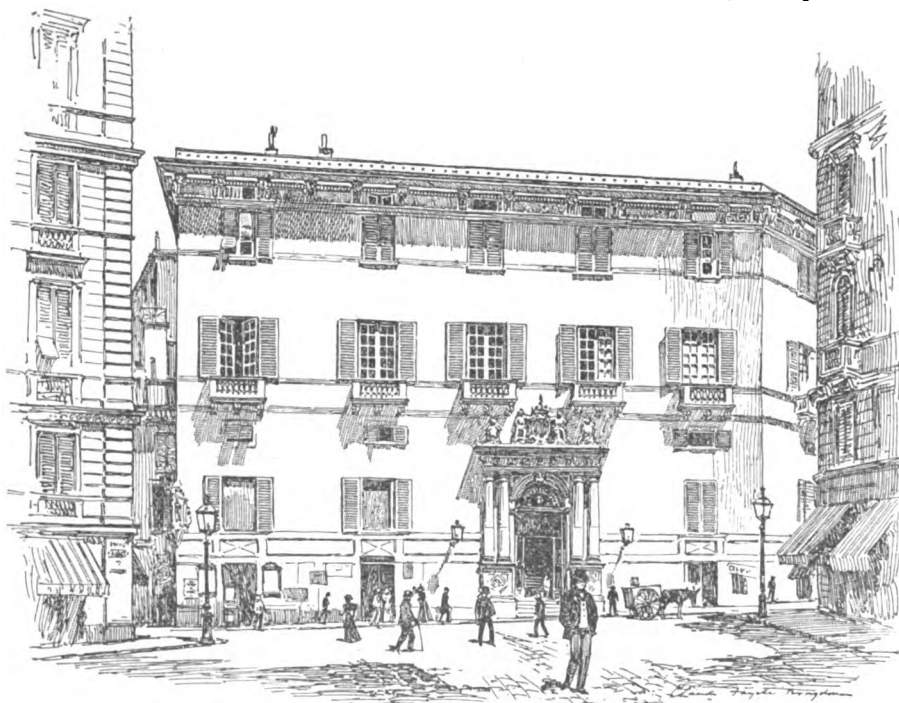
A Hill-top in Genoa.

find in old Italy anything that would add to my sense of the merely precipitous in architecture, but in Genoa the buildings, though not really so, appear higher than our own skyscrapers. This is partly owing to the fact that the streets are so narrow (defiles, at the bottom of which one wanders in semi-darkness with only a ribbon of blue sky far above), but more because so many of the houses start from eminences whose presence is concealed by the other buildings about their bases.

Thus they mount upward in great steps like some colossal staircase. The vertical dimension is everywhere enormously exaggerated, like those maps surveyors sometimes make, in which the horizontal measurements are drawn to one scale and the vertical to a greater. I used to wander for hours among the narrow, crooked streets, where the sunshine never penetrates and the air is never pure. It did not seem as though human beings could live in them, but I found them always fairly swarming with life. Merely to traverse some of these streets requires a good strong stomach, and is as perilous a business, in a certain way, as crossing the Channel in stormy weather, they are so reeking with the sickening smell peculiar to the Italian poor. The very worst are those adjoining the quays. The only scenes of drunkenness and violence I saw in Italy I witnessed there, where sailors of all nations, fresh from the confinement of long voyages, come to let their devils loose with drink.

The churches of Genoa are very numerous and beautiful. They especially abound in the poorer quarter of the city, where they form

a grateful refuge from all the filth and sordidness without. I remember one Sunday morning I found myself in a little square, one side of which was bounded by an ancient church, into which people were passing. I entered with them, for a "Baedekerite" in Italy would no more think of letting a church go unvisited than an Irishman would pass a horse-shoe on the road. The moment the heavy curtain fell behind me I was in another world. The garish daylight was supplemented by a rich, religious gloom. Columns of noble proportions rose at intervals to support the painted and vaulted ceiling; a multitude of candles caught the light on golden altars, and



Palazzo Spinola, Genoa.

held the vision captive in an hypnotic thrall; robed priests moved stealthily about among the hushed and humble worshippers; the odor of incense hung heavily in the air, and from some unseen recesses there trembled forth the music of organ and violin, and well-trained human voices blended together in some grand, suave, world-old measure of praise to the Most High.

The palaces of Genoa are distinct in type from those of other



Italian cities, though this statement is perhaps no less true of any other of the larger towns, for in each of them the buildings have features peculiar to that place alone. In Siena, for example, nearly every palace is crowned with a lovely arcaded open loggia (or was, for most of them have been bricked up). Bologna and Ferrara are remarkable for their ample and exquisite arcaded courts, and in Venice the feature most insisted upon is, of course, the balcony overlooking the canal. Perhaps the most characteristic thing about the Genoese palaces is the stairway, which there assumes such a size and importance as to constrict the court and dictate the whole interior arrangement. Another peculiarity is found in the loggias which flank each end of the façade of some of the larger palaces. They not only impart to the front a charm and distinction, but they must have been delightful as places of resort as well.

One of the most curious things about the buildings of Genoa is their painted and decorated exteriors. In no city is it more universal, though in Vicenza, Verona, and elsewhere I have seen it carried to greater lengths. The idea seems to be "Architecture or bust," and if the sculptured article is too expensive, paint is made to take its place, and columns and entablatures, door and window casings are painted on with as great a simulation of reality as is possible — which is not much. It is needless to say that the deception never deceives, yet the artist, with sublime confidence in his powers and myopia in the beholder, hesitates at nothing. He paints false windows just beside real ones, balconies where none could possibly be, and sometimes figures, in sentimental attitudes, upon them. In Verona the entrance arches to many of the palaces are so many theatrical prosceniums, framing just such chalky and ochreish landscapes, endless colonnades and impossible stairways as still adorn our drop curtains in America.

In summer half Genoa goes bathing in the sea, while the other half looks on from the Mura del Malo far above them. There I saw how the Genoese babies are washed: Pater, in a bathing-suit, enters the water with the naked child, and swashes it up and down there, unmindful of its frantic cries until it is soaked as a sponge. Mater, standing on the beach with a clean, dry sheet, receives it, and the nurse disappears with the agitated bundle.

The policemen in Genoa, as in some other of the north Italian towns, are costumed so as to present very much the appearance of the polished villain of conventional melodrama, who so ruthlessly pursues white-robed and long-haired virtue in the person of the village beauty, until foiled in the fifth act by the noble rustic lover. Their uniform consists of a long black frock coat, black trousers, a "stove-pipe" hat and white gloves. They carry in place of a club or side-arm a long silver-topped cane or baton, and the only thing that betrays their office is a numbered badge and some too-brilliant buttons. I often wondered what had become of all those old stage scoundrels in these days of Ibsenism, the New Woman, and Frohman's Chocolate Caramel Comedy Company. Now I know, and my artistic sense is satisfied. What fitter end than that these former breakers-of-the-law should now uphold it. They seemed to have lost little of their ancient elegance and romantic charm, and if they continue to engage in the chase of the festive village maiden, I am sure that the rustic lover is not as uniformly successful as we have been taught to believe.

It took me a long time to become accustomed to the dramatic vehemence of the Italians. For the first few days especially, I seemed always to be witnessing some quarrel which might even lead to a tragic close. I would see two men talking and gesticulating wildly, ready at any moment, it seemed to me, to spring at one another's throat. Then suddenly they would enter a carriage and drive off together, leaving me to surmise the simple truth, that one had merely asked the other if there was room for him in the carriage and had received an affirmative reply. My first experiences in the restaurants were little short of exciting. I very soon learned that when I was told to "seize an oar" I was not to take it literally, as it was only their way of saying "Yes, sir," but I never got very much farther than that towards understanding what was said to me. I soon learned the names of things, and would order the dish I wanted in bad Italian or American-bill-of-fare French. The waiter would shrug his shoulders, make a few passes with his hands, such as a conjurer does before he takes a rabbit out of your hat, and at the

same time pour forth a flood of Italian of which I could understand but little, but from which I gathered, in a general sort of a way, that the particular dish I wanted it was impossible to procure, because the cook had cut his throat and was that moment being transported to the hospital, or that he was sorry to inform me that the macaroni crop had been ruined the night before by the frost. Then he would disappear as suddenly as though shot through a trap-door, and in the course of half an hour or so (they take their time in Italy) would return with the very dish I had ordered, and deposit it before me with "Behold me; it is here!"

The Italians love these battles in the air. Their trade is always a kind of warfare. I have seen a man and woman altercation for half an hour about the price to be paid for one shrivelled little eel, chopped up into fragments, bringing into play in so doing enough of eloquent gesture and dramatic diction to have equipped the whole Lyceum School of Acting for a year.

In Pisa, I had only time for the "four-fabrics" and a glass of beer afterwards at Pietromani's, beside the yellow Arno, with all youthful Pisa parading up and down the Lungarno before me, making love in the warm summer twilight.

Of the matchless group of buildings on the Piazza del Duomo, much as I admire them, I can say nothing that is not trite, but I may permit myself a word about the echo in the Baptistery. It is the most beautiful echo in the world. When a note is sung, the whole building seems to vibrate with it like some vast instrument. It comes back enforced with all the harmonics necessary to make a perfect chord, and as the fundamental dies away these mount upward, higher and higher, liquid, clear, like bubbles in a spring. One never tires of evoking this rich, strange voice from nowhere. It made me realize, as nothing else has done, the close parallel which exists between music and architecture. I remember seeing somewhere — perhaps in Gwilt's "Encyclopædia of Architecture," a drawing showing the simple yet elaborate system of circles and tri-

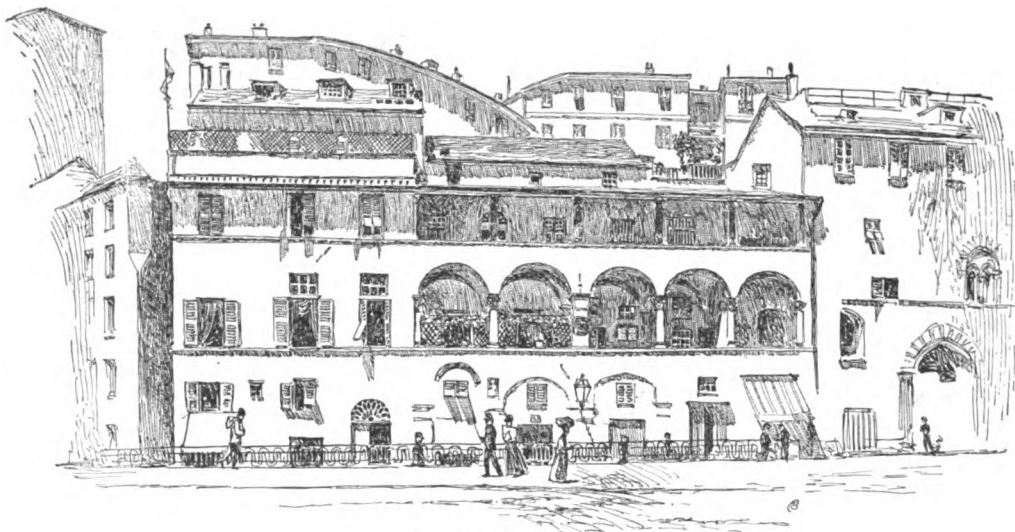
angles which are said to have determined the proportions of this Baptistery, and I believe that the echo is so beautiful because the building itself is everywhere of musical proportions, and its intervals of space are somehow converted into corresponding intervals of tone.

Siena was to me the most fascinating of all the Italian cities I visited, and if my ready money had not

run so low, and I had not had an unused "circular ticket," I believe I would have remained all summer and, perhaps, been there yet.

Seen from my window in the Palazzo Bandini, the town spread out in two directions like the arms of a fan, with the church of San Francesco at one apex and San Spirito at the other. The wide interval between was green with orchards and gardens, planted where once were busy streets, ploughed under after the great plague of 1348. In the middle distance the old city wall with its ruined towers climbed up and down the gentle slopes, just as so many of the pictures show it. Beyond, stretched fifty miles of Tuscan hills, a playground for the flying shadows of clouds. In the early morning the whole was enveloped in pearl-gray mist, out of which the sun rose grandly, tossing aside the vapors like the curtains of a bed, and leaving revealed the landscape, fresh as a still damp water-color. The morning merged into a burning noon, in which the brown roofs and salmon-colored walls shimmered with intense heat, and the foliage where the sunshine struck it took on hues of molten bronze. The evening was the Indian summer of each day-long year — still, pensive, yet serene. Far distant windows on the hills blazed like jewels with light caught from the horizontal sun, and then went out, one by one, as the valleys drew veil after veil of darkness over them. The church bells throbbed out their two sweet notes of joyful invitation; the blare of a bugle from the garrison mellowed and sweetened by distance and robbed of its warlike quality, mingled with the fresh laughter and shrill cries of romping children.

Nor was there any lack of "human interest" in the prospect, seen at any hour of the day. In the cool morning the gardeners came and watered their green beds and trimmed their plants. As day advanced, troops of naked boys disported themselves in and out of an embowered pool of water which may once have formed part of the system of fountains of the palace garden. Sunlight and the shadows of leaves dancing together on their brown young bodies made an Arcadia of the place, and it would not much have surprised me to



Via Carlo Alberti, Genoa.

have seen goat-footed Pan piping beside the stream, or fleet and shy Diana and her nymphs hastening to cover. At evening, when the shadows stretched half way to the city wall, men, women and young girls came out upon the noble palace terrace and talked and laughed, and made love, no doubt, till long into the night. I used to watch and listen at my window till nothing more was visible but the glowing points of the gentlemen's cigars, then I would go to bed and be lulled to sleep by their sweet, vehement Italian speech and gentle, liquid laughter.

This was very fine, but it was not, after all, Siena. Siena lay on the other side of my palace. Here there were no green fields, nor spacious terraces, but constricted, tortuous, stone-paved streets, plunging up hill and down, and lined on both sides with old buildings so high and narrow, and so crowded close together that it seemed as though their horizontal development must have been arrested by such close proximity, and that they had climbed upward from sheer necessity of expansion.

Rome, for all her antiquity, seems a modern city; Florence, also, in a less degree; Venice lies in mid-stream of sensation-seeking travellers, but Siena, when her day had past, was allowed to sleep in peace. Tourists, except the more adventurous, do not visit her, for she is away from the main arteries of travel and out of the course of circular tickets. Her shops are not vulgarized by displays of cheap jewelry and *articles de voyage*, nor her inhabitants corrupted by the lust for unearned and suddenly acquired wealth which travel inspires and ministers to. There is hardly a building that does not look at least three hundred years old, and one may wander forth at evening when the clamorous voice of trade is hushed and gloom conceals obtrusive details, and forget the insistent present, and live again in the glorious *cinquecento* past.

Siena is rich in treasures of art. Her cathedral is one jewel-casket—itself a jewel. The unfinished Opera del Duomo, beautiful in itself, possesses the still added interest which ruin and a sad, true story impart. In the Library, Time has held its hand, and the frescoed walls are hardly less fresh than when Pinturicchio laid aside his brushes. I might go on and enumerate all the fine churches, palaces and pictures, of which the city is full, but my knowledge is not yet great enough nor my pen adequate for such a task. I will present, instead, two images, oddly dissimilar, of some people who meet for the first time in the strange company I carry in my head. One was a little brown-frocked, barefooted monk, who resembled Francis Wilson even to his gay manner and cracked voice, and the other a troupe of acrobats who performed each evening in the market-place; two sorry clowns, a man with a cornet and another with a drum, and a painted woman dressed in tights, who performed with great caution on a tight-wire near the ground, and afterward collected pennies from the audience, moving about among the people with a swift and panther-like tread.

For some reason the memory of these people always rises first whenever I think of Siena, and so I have put them on this page, where, robbed of their background and detached from the mood in which I saw them, they must seem singularly out of place.

CLAUDE FAYETTE BRAGDON.

[To be continued.]

#### THE SUPPLY OF SEA-WATER TO LONDON.<sup>1</sup>

THE scheme I am about to lay before you is, in one sense, not a new one, inasmuch as an Act of Parliament was passed a few years ago, incorporating a Company for the Supply of Sea-water to London. Satisfactory arrangements having been made with all the local authorities and other bodies affected, the Act was passed as an unopposed measure, the scheme being viewed with favor by the said bodies. The powers granted by that Act were, however, allowed to lapse, in consequence of the great demands which were made by parishes, hotels, householders, and others for the supply of sea-water for public and private purposes, convincing the directors that their plans had been laid on too small a scale, the authorized capital being insufficient to meet the requirements certain to arise. That Act contemplated the supply of about one million and a quarter gallons per day, whereas the present intention is to supply nine or ten million gallons per day; and the area in London to be dealt with now is much larger than that originally contemplated. In the sense that no inland town has yet been furnished with a supply of sea-water, this is an entirely new scheme; and I propose showing that it is thoroughly feasible, at a reasonable cost, and that it will confer a great benefit on London as a town, and on Londoners as individuals.

*General Description.*—On reference to the diagram, it will be seen that the intake from the sea is opposite Lancing, between Brighton and Worthing; it is placed at a considerable distance to the seaward of high-water mark—almost at low-water level—and can, therefore, admit the sea at nearly all states of the tide, which has there, at spring tides, a range of about 20 feet. That spot has been selected for the position of the intake, as the sea there is remarkably free from contamination of sewage or other pollution.

The sea-water will first be pumped into the reservoir or settling-tank at Lancing, the bottom of which is about 10 feet below high water; this reservoir will have a capacity of 10,000,000 gallons. The water is thence forced to a reservoir situated near the summit of Steyning Round-hill. The pumps and machinery are all situated

alongside the reservoir at Lancing. This is, therefore, the or pumping-station in the whole system; it adjoins the railway, and provided with its own sidings for coal, etc. The Steyning reservoir will be situated nearly 500 feet above high-water level, and will have a capacity of 10,000,000 gallons. The sea-water will thence, by gravitation, to a third reservoir, at Epsom, over 200 feet above high-water level; this, also, will have a capacity of 10,000,000 gallons. From this reservoir the sea-water will flow, by gravitation to London, where it can be delivered under the pressure due to the head, which is greater than that which most of the water-company command. The sea-water will be conveyed in mains the whole distance, and as there will be two days' supply in the Steyning and Epsom reservoirs together, the mains will be always full. It is a practical impossibility that they should ever be frozen.

It will be seen that the route of the mains is through Lancing, Bramber, Steyning, West Grinstead, Horsham, Capel, Dorking, Mickleham, Leatherhead and Ashstead, to the reservoir at Epsom thence through Ewell, Cheam, Morden, Sutton, Merton, Wimbledon, Mitcham, Tooting-Graveney, Streatham and Clapham, to Battersley where a branch main runs off for supplying that locality. Crossing the Thames at Battersea, the mains pass through Chelsea, Kensington, Paddington, Belgravia, etc., and ultimately to Victoria Park. Any of the places *en route* can be supplied.

On reference to the plan showing the position of the mains in London, it will be seen that the mains form two complete circuits. The westerly circuit traverses Kensington, Paddington and Epsom; the mains passing along Cromwell Road, Warwick Road, Addison Road, Uxbridge Road, Ladbroke Road, Penbridge Square, Bayswater Road, Stanhope Street, Connaught Street, Park Lane, Grosvenor Crescent, Belgrave Square, Port Street and Brompton Road. There will be a branch main up Queen's Gate to Kensington Gore. The easterly circuit comprises Mayfair, Oxford Street and the Strand districts; the mains passing along Park Street, Wimpole Street, Mortimer Street, Charlotte Street, Bedford Square, Russell Square, Southampton Row, Theobald's Road, King's Road, Farringdon Road and Street, Victoria Embankment, Northumberland Avenue, Pall Mall, St. James's Street, Piccadilly, Berkeley Street and Square, Mount Street and Park Lane. From the eastern side of the circuit, starting from Farringdon Street, there will be a main passing along the Barbican, Curtain Road, etc., to Bethnal-green Road, terminating near the gates of Victoria Park. And from the southern end of this circuit, starting from Charing Cross, there will be a main passing along Whitehall and Parliament Street to Abingdon Street terminating at the end of Great College Street.

From these various mains, service-pipes will be laid to the adjacent houses and other buildings as required, and hydrants will be provided in the streets for the supply of water-carts, etc.

*Municipal Purposes.*—The first place to make habitual use of sea-water was Ryde, more than forty years ago. Tynemouth was the next in 1872. Barrow-in-Furness, Birkenhead, Blackpool, Bootle, Bournemouth, Falmouth, Great Yarmouth, Grimsby, Gillingham, Harwich, Littlehampton, Plymouth, Portsmouth, Shoreham, South Shields, Torquay, Weymouth and other places, have since followed those examples. It is found that once watering with sea-water is equal in efficiency to twice or even thrice watering with fresh water. Evidence of this fact would have been given to the Parliamentary Committees on the former Bill by the surveyors of some of the places named, had the Bill not passed unopposed through both Houses. Sea-water keeps the road-surface moist for a long time, but without slush. It hardens and binds macadam roads and forms a preservative crust which prevents dust from rising. It is the one thing needed to make wood-paving perfect, as, by retarding decomposition of the street refuse, it will effectually prevent the annoyance of any smell arising therefrom, of which an annoying public complaint has occasionally been made; as wood-paving is fast displacing granite and macadam, this is a feature of considerable practical importance. The proportion of salts in sea-water is about 3½ per cent, or, more exactly, 36½ parts per 1,000. Of these, nearly 30 parts are chloride of sodium, or common salt, and about 3½ parts are chloride of magnesium; it is owing chiefly to the deliquescence of these salts that the roads remain sufficiently moist for so long. A ton of sea-water contains about 220 gallons, from which is deposited 80 pounds' weight of salts. A water-cart will spread a ton of water over a surface of from 1,900 to 2,000 square yards.

The cost of sea-water for street-watering in London will be, most probably, less than that of fresh water; but were it even the same, the advantage and economy of sea-water would still be great, for the cause—(1) the quantity used would not exceed half; (2) the cost of distribution, horse wear, etc., would be correspondingly reduced; and (3) the roads would last longer in sound condition, and cost less to repair. This is the recorded experience of the places already named. In the hottest weather, when water is most required, there is now too often a difficulty in getting sufficient water for the streets, whereas the sea could never run short.

The use of sea-water for flushing sewers is found to be decidedly beneficial; decomposition is retarded, and the sewers are kept cleaner and become more wholesome when sea-salt is present in them. The borough surveyor of Great Yarmouth, for instance, stated that from his experience the advantage of being able to flush the sewers with sea-water was alone worth the whole cost of the works for the supply of sea-water for all purposes. His experience is that the effect of flushing with salt water has been to thorough-

<sup>1</sup> A paper read by Frank W. Grierson at the Society of Arts and published in the *Journal* of that Society.

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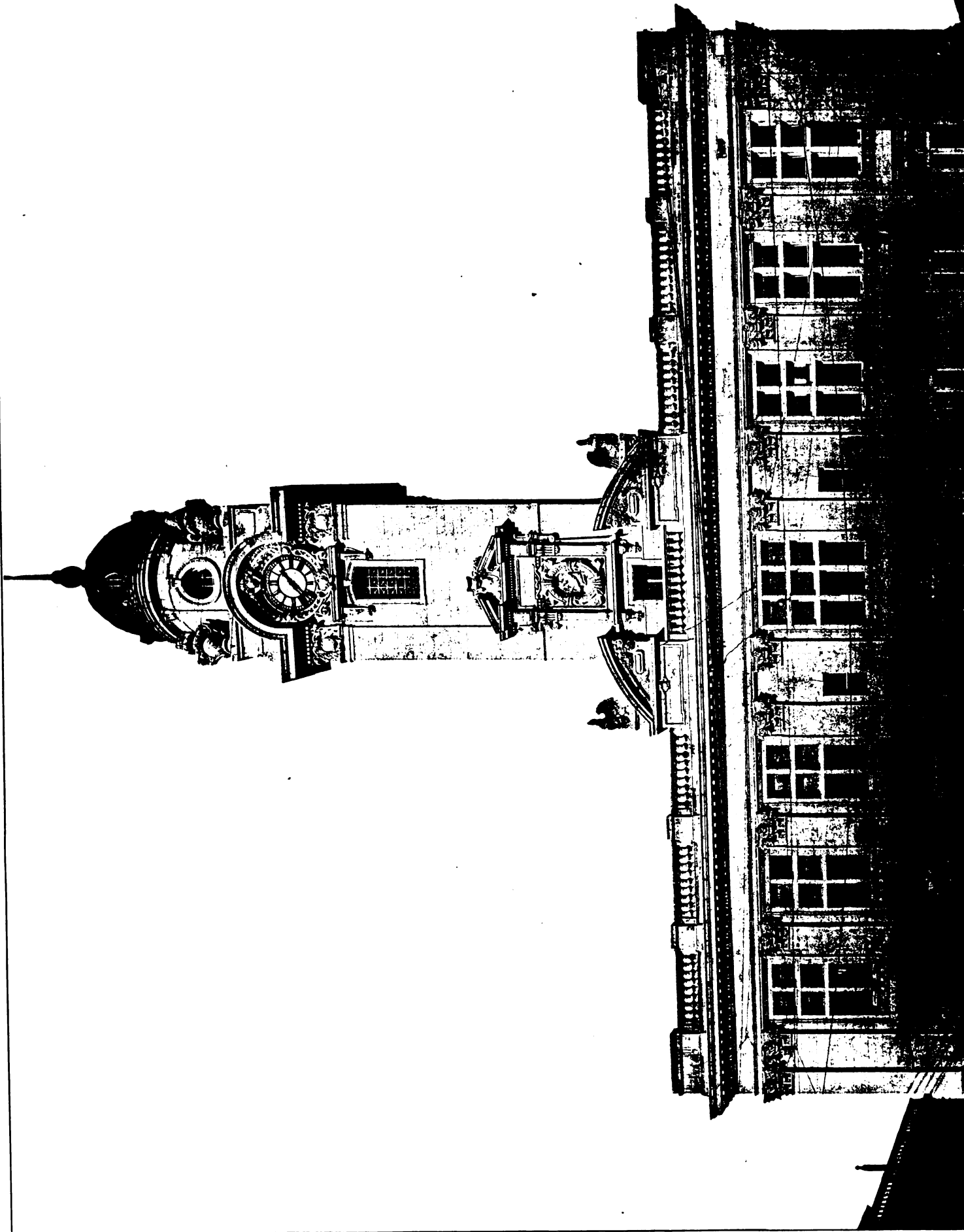
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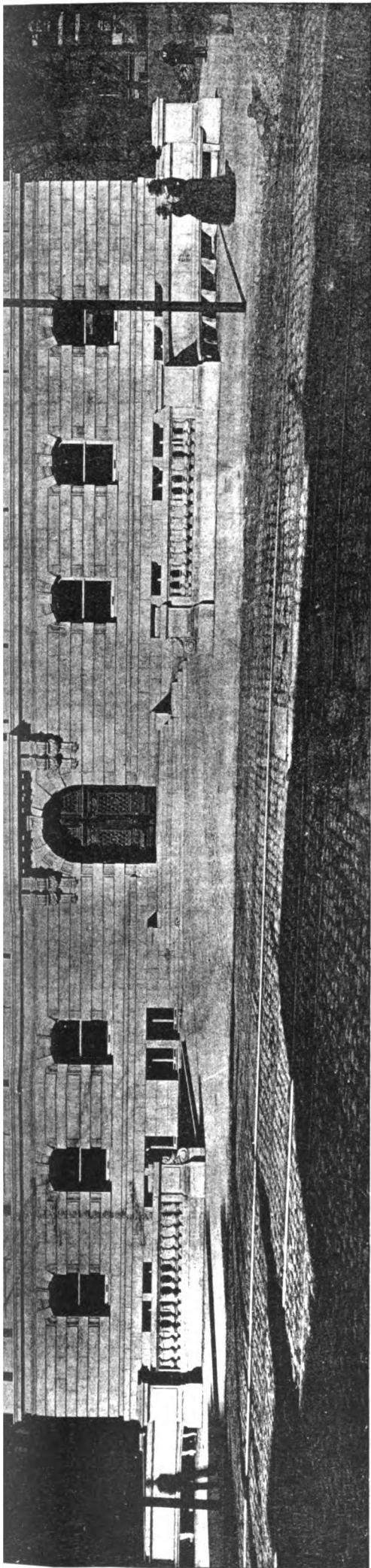

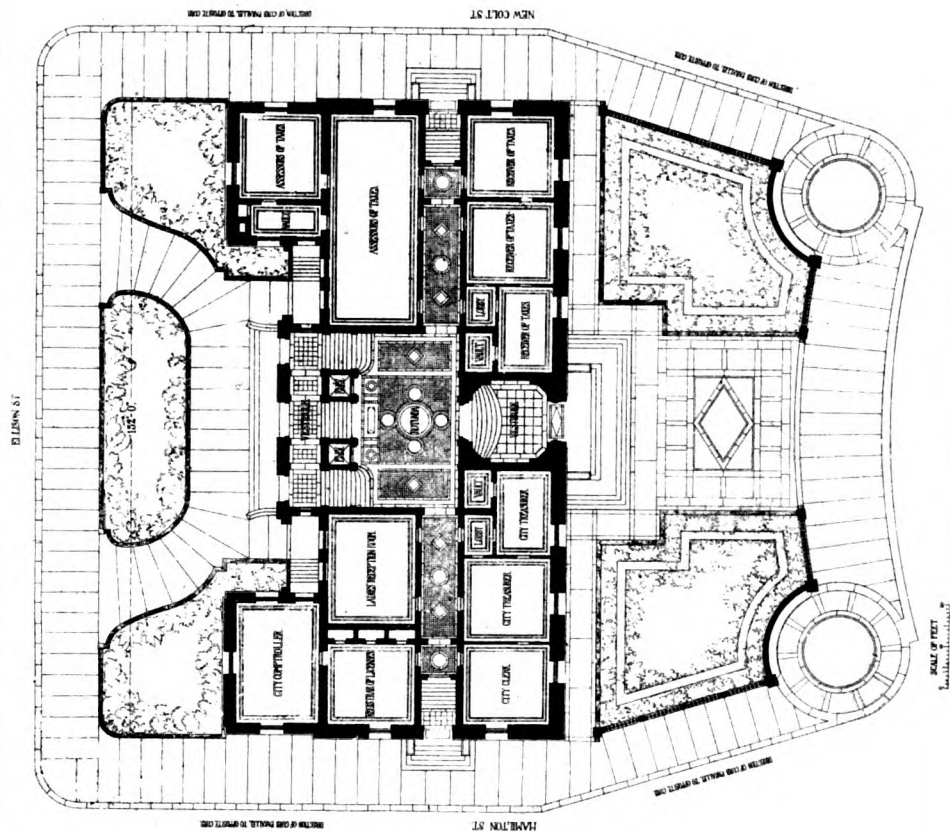
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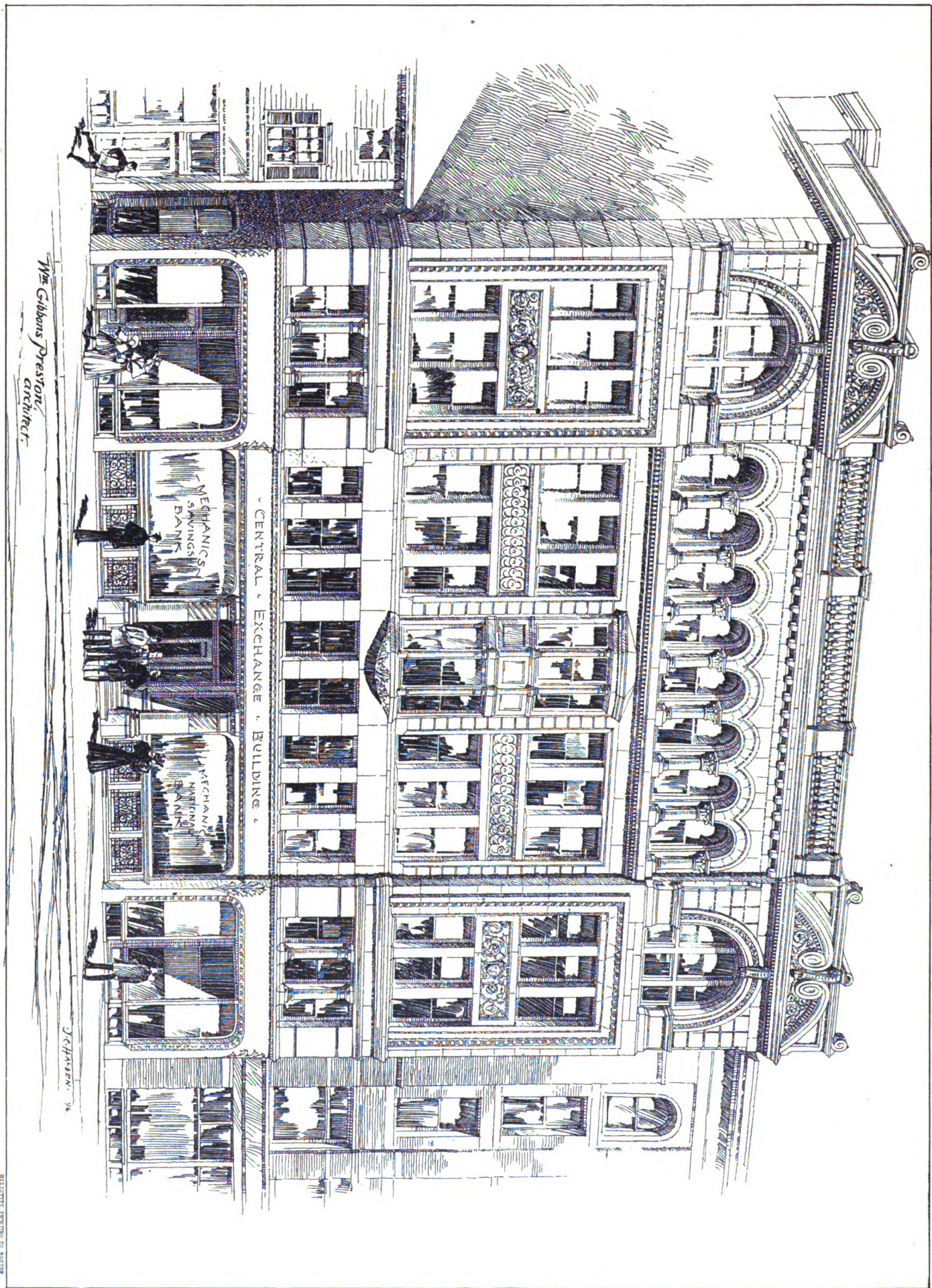
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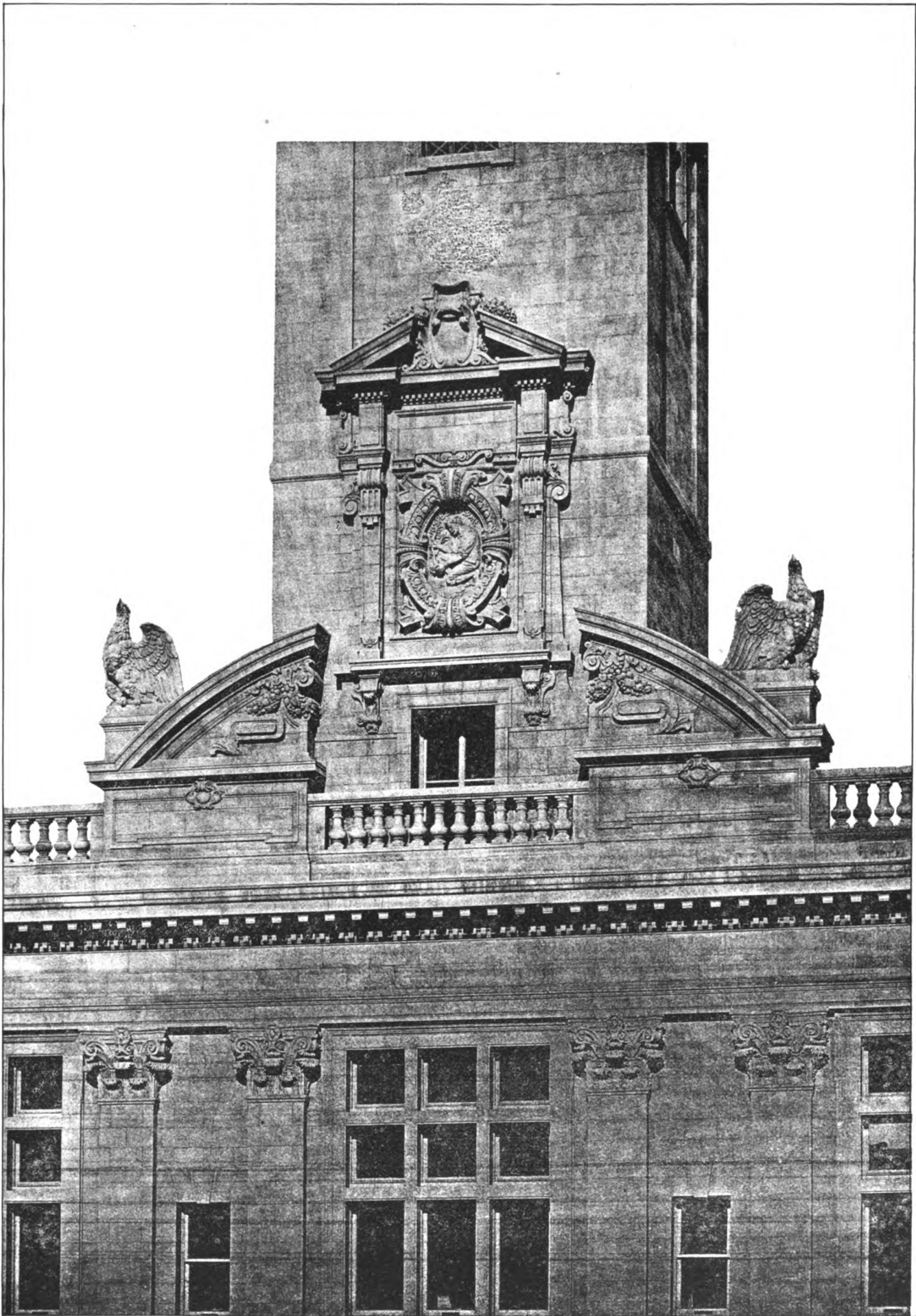
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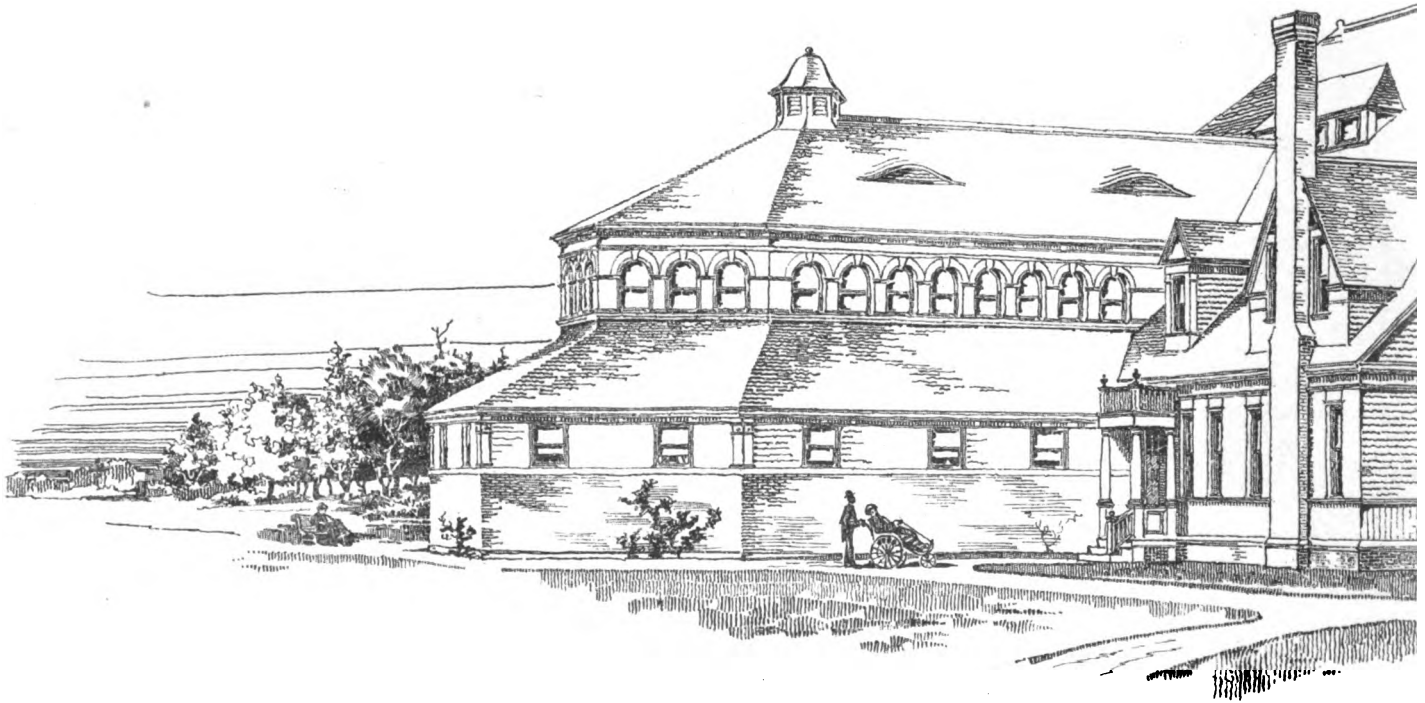
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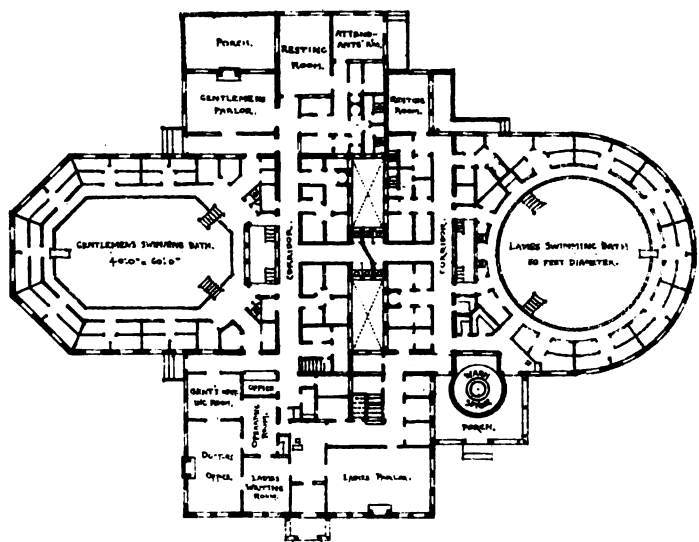
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FOR THE  
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—  
C. H. READ, JR., ARCHITECT,  
RICHMOND, VA.



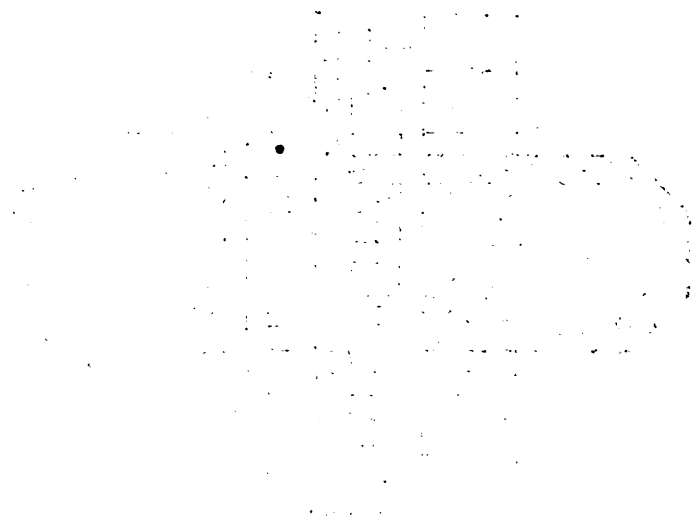




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cleanse the sewers, and that no nuisance from its use has been created, whilst owing to its greater specific gravity he considers it more valuable as a flushing agent. Its effect in the Yarmouth sewers has been to reduce, and, in fact, almost entirely to prevent the generation and accumulation of sewer-gas. Sewers which could not be entered by the sewer-men until the man-hole covers had been opened several hours can now be entered by them, and have been entered, without any inconvenience, immediately on the removal of the man-hole cover.

As nearly as can be ascertained, about 40,000,000 gallons of fresh water are now daily consumed in London for non-domestic purposes. This water has been filtered for drinking, but it is nearly all consumed in requirements which might be better satisfied by the use of sea-water.

Sea-water will be available for use in extinguishing fires. It will be on constant service under good pressure, and can be obtained from the hydrants at any time in abundant quantity. There will be no hunting for turncocks, or having idly to watch a fire progress, owing to insufficient supply or absence of necessary pressure.

Public parks, such as Battersea and Victoria, could be supplied with salt-water bathing lakes, and swimming therein would offer a greater attraction than swimming in fresh water.

Public baths, which are fast increasing in number, will also be supplied with sea-water. The fact that it is considerably easier to learn to swim in salt water than in fresh will, no doubt, make these institutions still more popular.

Within the last fortnight over 300 members of those London Vestries through whose jurisdiction the mains will pass have communicated to me their assent—in many cases a very emphatic assent—to the opinion that a supply of sea-water to London would be of beneficial use for municipal purposes.

*Hospitals, Schools, etc.*—There is a general consensus of medical opinion as to the value of sea-water to health. Medical evidence of the highest importance was laid before a Parliamentary Committee on a previous occasion as to the great benefit a large supply of sea-water would be in connection with hygienic work, and as to the desire of the hospitals for the establishment of sea-water baths in connection with their practice. More than a hundred physicians and medical officers of health testified their approval of that project, as being of the first importance from a medical point-of-view. "It is impossible, as a matter of fact, ever to imitate the composition of sea-water by putting into the water any salts; we may know its composition exactly, but we cannot make it." Although the residue of sea-water may be collected and dissolved in water, the resulting liquid is not sea-water, but only salt water, for the reason that a great many of those substances which are held in solution in the sea never become soluble again after they have once been precipitated. It will be easy to supply most of the hospitals of London with sea-water—always available and abundant in quantity—at the same cost as fresh water, or even less. Every Board or other school in the neighborhood of the sea-water mains will be able to have its own swimming bath, and many thousands of London school-children thus greatly benefited in health, and even taught to swim.

From many leading members of the medical profession, I have quite recently received the expression of their assent to the opinion that a supply of sea-water to London would be of beneficial use for both public and private purposes.

*Hotels and Residences.*—During the passage of the former Bill through Parliament, the demands of hotel proprietors and householders for sea-water were so numerous, that it is pretty certain it will not be long after sea-water is obtainable before a good house not so supplied will be an exception.

*Saving of Fresh Water.*—It will be remembered that a Royal Commission has recently reported on the present supply of fresh water to London, in view of its probable inadequacy in a comparatively short time. The present consumption is 200,000,000 gallons a day, of which, as nearly as can be ascertained, about 160,000,000 gallons are used for domestic purposes, and 40,000,000 gallons for municipal and other purposes; that is, 20 per cent of the total supply is consumed for non-domestic requirements. Nearly the whole of this 20 per cent might, with great advantage both as to economy and efficiency, be satisfied by the use of sea-water, thus releasing or providing 40,000,000 gallons of fresh water a day for household purposes, and so practically increasing the present supply to that extent. This is equal to an increase of 25 per cent, without any extension of fresh water-works or further drawing on the present sources. This fact, apart from other considerations, affords a weighty reason for the speedy realization of the present project, and its extension to the whole of London.

The Royal Commissioners reported that by extensions of the present works, and by further drawing on the Thames and Lea, the existing sources might be made to supply 420,000,000 gallons a day, and so be adequate for the wants of London for another thirty-six years; taking the then population at 11,250,000, and the consumption at thirty-five gallons per head, London would then require not less than 385,000,000 gallons a day. From the foregoing considerations, it follows that if sea-water were used for all municipal and public purposes, and fresh water only for household requirements other than baths, the existing sources of supply would remain adequate for a population of 15,000,000, which London cannot reach till 1950, supposing the rate of increase to remain the same as from 1881 to 1891.

Fresh water is now supplied for public purposes at an average price of about 9d. per 1,000 gallons. Sea-water could well be supplied at a less price for such purposes; but taking into consideration the greater efficiency of sea-water for street-watering, etc., as before pointed out, the saving, even at the same price, would most probably amount to one-quarter or even one-third of the present cost to the ratepayers.

*Cost and Time.*—The cost of the complete carrying out of this project will be £450,000. Sea-water will be supplied by metre for public purposes, hospitals, schools, etc., at a price not exceeding the present charge for fresh water, and it is intended to supply householders also by metre at a price which will be only a fraction of the present cost of fresh water.

The construction of the works could be completed in about two years, so that if the Bill which has been deposited is allowed to pass with only those moderate protective clauses which the promoters will willingly accord, thereby averting the necessity of going before a committee on opposed Bills, the Royal assent will in all probability be obtained in June, or possibly before that month, in which case large numbers of Londoners will, in the summer of 1898, be able to enjoy the luxury of a daily bath of real sea-water in their own homes.

*Experience.*—It only remains for me to lay before you the experience gained as to the effect of the use of sea-water for public purposes in the chief places where it has been so used. The following information, compiled from authoritative statements, sums up the experience of several years. It will be seen therefrom that the testimony in favor of the use of sea-water for street-watering is practically unanimous, Hastings being the only case not absolutely and strongly favorable, and also that there is a vast preponderance of experience in favor of its use for flushing sewers, etc. The information given with the date 1887 was obtained by the Borough Surveyor, of Ipswich, from the surveyors of the towns named, with a view to the installation of a sea-water supply in that town, but owing to the existence of an exclusive clause in the Act of the Water-works Company which supplies Ipswich, it was found impossible to carry out the scheme. The surveyor has, however, kindly given me permission to make the information public. The information given with the date 1891 was obtained by the Borough Engineer, of South Shields, from the medical officers and surveyors of the places named, and a sea-water supply has since been established in that town. The information given with the date 1895 was communicated to me last month by the engineers and surveyors of the towns named, and I desire to take this opportunity of thanking the municipal officers who have so kindly favored me.

#### EFFECT OF THE USE OF SEA-WATER FOR PUBLIC PURPOSES.

*Barrow-in-Furness* (Used for street-watering).—I am greatly in favor of a sea-water supply. It occurred to me when I first began to use sea-water for street-watering that it might have in time a prejudicial effect on the macadam. I, therefore, selected two lengths of the same street, and had one watered with sea-water and the other with fresh water, and found after an extended trial that the sea-water had no such effect, while for keeping down dust it is immensely superior to fresh water. Sea-water cakes the surface of the road, which remains damp much longer; it binds the top layer of stone, and improves the condition of the road in summer to a marked extent. One thousand gallons of salt water equal in efficiency for street-watering 2,000 to 3,000 gallons of fresh. The scheme will be much extended. (1895.)

*Berwick, Places near* (Used for street-watering).—Salt water is very effective on roads made or repaired with flint or granite. It has a binding tendency, and causes a skin of adhesive matter to form on the roadway. One-third the quantity of salt water on wood will keep it in a more moist state than fresh water will, with no injurious effects. No complaints of salt water affecting the stock of any shopkeepers, and no offensive decay of street refuse caused. All parties having control of street-watering should use salt water where it can be had, from an entirely economical point-of-view, as well as for the comfort of the inhabitants. One cart of salt water is, in my opinion, equal to two carts of fresh water, giving a more lasting and beneficial result. Our macadamized roads that are watered with salt water are a pleasure to drive upon in the summer season, in comparison to those watered with fresh water, as we never seem to have a loose stone upon them. (1887.)

*Birkenhead* (Used for street-watering).—Salt water does not injure granite roads. No offensive decay of street refuse is caused. Its use is economical, inasmuch as one spread of salt water is equal to, at least, three spreads of fresh water. (1887.) It is found that sea-water is effective for a longer period than fresh water. (1895.)

*Blackpool* (Used for street-watering and sewer-flushing).—We use salt water for street-watering and flushing sewers, in fact, for a great many purposes. (1887.) Streets watered with salt water do not require to be watered as frequently as with fresh water. (1895.)

*Bootle* (Used for street-watering, sewer-flushing and public baths).—Find it more economical as to cost than fresh water, and for several purposes it is decidedly better. (1895.)

*Bournemouth* (Used for street-watering and sewer-flushing).—No objections arise to the use of sea-water, no nuisance is caused by the admixture of sea-water with sewage. For flushing sewers it is quite as good as fresh water, if used in sufficient quantity. It is much more

effectual than fresh water for watering roads, one application of salt water being equivalent to three of fresh. The use of sea-water on a hard road exposed to the sun or wind causes a sort of glazed condition of the surface. It is in favor with the shopkeepers and public generally; no disagreeable smell is caused, and no complaints are received. (1891.) There is no doubt that considerable economy is effected in its use for road-watering; no injurious effect. It leaves a partially glazed surface on the roads, which is a great advantage in summer, because it binds and prevents the dust from blowing about; humidity is also maintained. The cost of road-watering is reduced at least 50 per cent. All our streets are watered with salt water. Every dead end of the sewers is connected with the salt-water mains, so arranged that any sewer can be flushed by simply turning a sluice valve. All our public urinals are supplied with salt water. (1895.)

*Coatham* (Used for street-watering and sewer-flushing).—We have had our salt-water works in use since 1877 for street-watering, flushing sewers and urinals. With regard to street-watering we find it far superior to fresh water, but in respect to urinals and sewer-flushing we cannot say it is superior to fresh water, and it is used for this purpose on the score of economy. (1895.)

*Falmouth* (Used for street-watering).—Our streets are all macadamized; I have observed that the salt water hardens the surface of the roads, and keeps the stones from rising. There is economy in the use of salt water, it will keep damp much longer, the roads will not require watering the third day, after being watered two days in succession. No objection to its use for flushing purposes. (1887.) Pure sea-water has many advantages over fresh water, and is much to be preferred. It has the effect of causing an incrustation of the road surface, thus preventing wear and tear, and also reducing the quantity of dust. It also keeps damp for a much longer period than fresh water, therefore a less quantity will do, thereby effecting a considerable saving in team labor. Carts are filled from hydrants from point to point. (1895.)

*Fleetwood* (Used for street-watering and public slaughter-houses).—The water we use is raised out of a well into a large tank, which contains a large quantity of salt; the well is in close proximity to the bed of the river or sea, and I consider it very effectual. (1887.) Salt water, such as ours, is much better for street-watering than fresh water, for various reasons; at times when dust is most troublesome in the streets—it is shortly before the rain begins to fall—the salt on the surface of streets becomes quite damp, and so prevents a large amount of dust being blown into the shops where doors cannot be closed against customers. (1895.)

*Gosport and Alverstoke* (Used for street-watering and flushing purposes).—Sea-water has been used here in an irregular kind of manner for years past. Last season salt water was used exclusively for road-watering and flushing purposes, with the very best possible results. It gave satisfaction to the inhabitants generally. When fresh water is used, our roads require watering nothing less than twice and sometimes three times each day, but with salt water once each day is sufficient. No complaints from tradespeople as to the tarnishing of metal goods, or of its being a destructive agent to boot leather or goods exposed for sale outside shops. Horse-keepers have great faith in salt water for keeping the legs of their cattle in good condition. In consequence of its antiseptic properties I much prefer it. (1895.)

*Great Yarmouth* (Used for street-watering and sewer-flushing).—For seven years a flint and gravel road was watered with salt water. The road was about two miles in length, and, when watered with salt water, cost £70 a year less than it did with fresh water, and the road has never been in so good a state of repair. For three years five miles of gravel and flint road have, as an experiment, been watered with salt water, and the expenses of keeping this class of road are found to be quite 30 per cent less than with fresh water. Thirty miles of these roads and five miles of granite roads are now watered with salt water. If salt water does a granite road no good, it certainly does it no harm. The sea-water appears to gum the dust down on the road, and this must be got off in the early autumn. No bad result has been observed on a wood-paved street. The supposition that delicate articles exposed for sale are injuriously affected is a piece of "bosh" and a scarecrow. The town is now much more free from dust, and that has pleased the shopkeepers, who, one and all, would vote for salt water in preference to fresh. Street refuse does not become so offensive with sea-water as with fresh water. The saving in road material and repairs, and in the cost of water distribution is very great, in consequence of the less quantity required, and the roads are much better watered. By flushing, the sewers can be kept quite clean, which is worth the cost of the whole job. (1887.) I know of no objection to the use of sea-water for flushing sewers, watering streets or for the supply of private houses. The admixture of sea-water with sewage certainly does not cause any nuisance. The generosity with which the water is used jams more sewer-gas out of the sewers, but does not create it. Sea-water is quite as efficient as fresh water, and is, sanitarily, superior; its chlorine and ozone purify the sewers. The Water Company are the only people who do not like it. (1891.) On light gravel roads sea-water does good, and saves 25 per cent in repairs; on granite macadam roads with heavy traffic it does no harm. In watering, one load of sea-water goes as far as three loads of fresh water. (1895.)

*Grimsby* (Used for street-watering and sanitary purposes).—The

use of salt water for watering roads repaired with granite has not in any way deteriorated them. During the last three seasons salt water has been used on the roads. I have not had a single complaint from any shopkeeper of damage caused to any goods exposed in shops; on the contrary, I have on several occasions heard tradesmen say that since salt water was adopted they have saved greatly through the absence of dust. I have never noticed that its use occasions any offensive decay of refuse, but I believe that the salt in the water would more tend to preserve refuse. Its use is decidedly most economical, as one load of salt water will last twice as long as one of fresh, and when it has dried, it leaves a thin crust of salt on the surface, which binds the dust and prevents its rising. (1887.) We have recently had a salt-water supply laid down for sanitary purposes. (1895.)

*Harwich* (Used for street-watering and sewer-flushing).—After a short time a crust is formed on the surface, which effectually prevents dust from rising, even when the road is apparently dry, but when rain comes after a long spell of dry weather, this crust is turned into a viscid mud which is not very desirable. No complaints from tradesmen or others as to bad effect on delicate articles exposed for sale. It does not occasion any offensive decay of street refuse. It is both economical and efficient, one load of sea-water doing as much good as two loads of fresh. (1887.) I have used sea-water for these purposes for some fifteen years, and certainly prefer it to fresh water; particularly for street-watering. (1895.)

*Hastings* (Used for street-watering and sewer-flushing).—No injurious effects on roads repaired with flint, gravel or broken granite. Have never heard complaints as to effect of salt water on delicate articles exposed in shops. Its use does not occasion any offensive decay of street refuse; is economical and efficient. Salt water has been supplied to private and public baths, schools, hotels, etc., for some time here, and is very satisfactory, both as regards efficiency and economy. (1887.) Sea-water is quite as efficient as fresh for removing sewage matter. The objections to flushing sewers and urinals with salt water are considerable. I consider the use of salt water for any of the above purposes is, from a sanitary point-of-view, undesirable. The use of salt water for street-watering and supplying private houses is decidedly objected to by the public. The outcome of the experiments was that in the long run 200 gallons of sea-water were proved to keep down as much dust as it would require 300 gallons of fresh water to do, but the drawbacks in every other respect are so great that if a town has plenty of fresh water, I should say decidedly not to use sea-water. I am decidedly of opinion that there is no saving, and a very considerable number of objections to it. (1891.) In practice it has been found that sea-water is more efficacious in laying the dust than fresh water, but that the damage done to macadam roads by salt is very considerable. The general opinion expressed was decidedly adverse to the use of salt water for street-watering. For sewer-flushing sea-water is equally good as, and perhaps, where the gradients are good, better than, fresh water. The Corporation decided a few months ago to entirely discontinue the use of sea-water, in consequence of having thrown on their hands surface-water reservoirs of the capacity of 41,000,000 gallons, and they are now using the water in these reservoirs for watering and flushing purposes. (Note.—*This is the only unfavorable opinion.*) (1895.)

*Ilfracombe* (Used for street-watering and sewer-flushing).—There is not the least doubt that it greatly assists to keep the surface of the street free from dust when used for the purpose of street-watering; it is especially useful on level roads, or those with slight gradients; it is inclined to make steep gradients slippery when used on them. It is also most efficient for sewer-flushing. The only place we can get it without laying down special plant is at the baths; the terms and difficulty of being able to get it when required led to its being abandoned. (1895.)

*Littlehampton* (Used for street-watering).—The scheme was carried out here eight years ago, and has, up to the present, answered its purpose very well. The advantages of employing sea-water instead of fresh water for road-watering purposes are two-fold; one load of the former equals nearly two of the latter, and there comes a great saving of the public water-supply, generally at a time when there is the greatest demand for it. I have, however, experienced this one disadvantage: late in the autumn, when thoroughfares are generally damp, the latent saline properties of the sea-water on the macadamized road surfaces show themselves in the form of a slime on the road surfaces, but a few good scouring rains, as a rule, remove it in time. (1895.)

*Londonderry* (Used for street-watering).—In my opinion it is preferable to using the city water-supply. I have never heard of any complaints of damage to goods, nor carriage owners, nor in any other form through use of salt water. (1888.) Find it much superior, both for street-watering effect and as regards economy. (1896.)

*Plymouth* (Used for street-watering).—We use salt water indiscriminately on all macadam roads. Every one likes it. It forms an incrustation on the road, which preserves the face and retains the moisture. One load of salt water goes farther than two of fresh. Never heard any complaint as to effect on delicate articles exposed in shops. It does not occasion any offensive decay of street refuse, as it is a disinfectant. (1887.) It is used very considerably during the very dry and hot part of the summer. It is superior to ordinary fresh water, from the fact that the roads do not require watering so



frequently when salt water is used. This remark applies both to macadam and wood-paved roads. (1895.)

*Portsmouth* (Used for street-watering and public baths).—It has a very good effect on flint or gravel roads; it binds them; not so good on roads repaired with broken granite. Has no effect on delicate articles exposed in shops, and does not occasion any offensive decay of street refuse. Its use is both economical and efficient; one load of salt water equals three loads of fresh in efficiency. (1887.) I believe salt water to be far more efficient than fresh; more particularly this is seen in the flushing of urinals and the watering of streets; but the good effect in the flushing of sewers may not be any less because it is not so easily seen. Salt water appears more efficient than fresh water; being of greater specific gravity, it, so to speak, carries the sewage on its back. The public and shopkeepers favor the street-watering with salt water. (1891.) I am most favorable to the use of sea-water for road-watering; it is no doubt more economical than fresh. It is well known that sea-water contains a large amount of salts of a highly deliquescent nature, takes longer to evaporate than fresh water, and the streets will keep moist for a longer period than when watered with an equal quantity of fresh water. It was at first thought by tradespeople that their goods would be injured by the use of salt water, but I have not received one single complaint since the adoption of the scheme. As watering the roads with sea-water is so economical, I have strongly recommended my committee to extend the scheme to the whole of South-sea. (1895.)

*Redcar* (Used for street-watering and sewer-flushing).—Sea-water is found as efficient as fresh water; no objections arise from its use, and its admixture with sewage in the sewers does not cause any nuisance. Is in favor with the shopkeepers and public generally; the ratepayers consider the salt-water scheme a great boon. (1891.) We find it to be more effective for laying dust; it lasts twice as long as fresh water. (1895.)

*Ryde* (Used for street-watering).—On roads repaired with flint or gravel it causes a crust to form, and keeps damp longer than fresh. We have used salt water for street-watering about thirty-five years; its use is economical and efficient; no complaints from shopkeepers. (1887.) We find it superior to fresh; but on our steep roads we are obliged to use fresh water for the second coat, otherwise the road would become too slippery. (1895.)

*Shoreman (New)* (Used for street-watering and sewer-flushing).—It binds the road and causes a hard incrustation to come on the surface, which is very beneficial to vehicular traffic. Never had any complaint as to its being injurious to delicate articles exposed in shops. Its use is very economical; once watering with salt water is equal to twice with fresh water. (1887.) It is, no doubt, superior to fresh water for watering roads, as it does not evaporate so quickly, and also, I think, improves their surface. For flushing purposes it is also well adapted, from its disinfecting properties. (1895.)

*South Shields* (Used for street-watering).—A beneficial effect on the road, binding it together. Its use effects a great saving in horse hire and time. (1887.) The roads certainly keep moist for a very much longer time than when watered by fresh water, and also the sea-water has a binding effect on the surface of the road which is not so prone to disintegrate. The roads do not give off a disagreeable odor; sea-water tends to prevent decomposition rather than to increase it. (1891.) Sea-water is very superior to fresh water for watering streets and roads, the moisture lasts so very much longer. I have known our roads to be dusty an hour after watering with fresh water, while roads watered on the Saturday with sea-water retained moisture till the Monday, and did not need watering till the next day; thus the saving in horse hire is immense. (1895.)

*Stockton-on-Tees* (Used for street-watering).—No prejudicial effect on roads. Salt water produces a freshness quite unknown in fresh water, and keeps moist for a longer period. It is quite adapted for macadamized roads, and can be used with advantage on wood. As regards causing offensive decay of street refuse, sea-water is preferable to fresh water. As the Corporation commands a very large interest in the supply of water for domestic purposes, it has not been worth while for them to carry out the scheme for the supply of sea-water. (1887.)

*Torquay* (Used for street-watering).—We use sea-water to some extent; the effect is not very marked in any way. (1887.) We use sea-water upon our roads very largely during the summer. I have found the use of sea-water much more economical than fresh water, and more efficient. It has been in use for nearly fifteen years. We get no complaints as to its being used. (1895.)

*Tynemouth* (Used for street-watering, sewer-flushing and public baths).—Watering macadam roads with salt water cakes the surface and binds the top metal, improving the condition of the roads to a marked extent. No particular effect on wood paving noticed. A jeweller states that its use causes no noticeable effect on his goods. Have not noticed any offensive result from the use of salt water in streets. Its use is both economical and efficient; one watering with salt water is worth three with fresh water. (1887.) No objections arise from the use of sea-water. It is as efficient as fresh water for flushing sewers and carrying sewage matter. With regard to watering the streets, we consider the moisture is retained longer than when fresh water is used. (1891.) As regards economy, we find the sea-water to be superior to fresh. With respect to effi-

ciency, I cannot say the sea-water is in any way superior to fresh water for the flushing of sewers, but for street-watering it certainly is superior. A thin crust of salt is formed upon the roadways, which binds the dust, and the effects of the salt water are consequently more lasting than those of fresh. (1895.)

*Weymouth* (Used for street-watering).—The salt forms a crust on the road surface, which keeps the dust from rising. I have never received complaints. The shopkeepers prefer the use of salt water, as it is more effective in keeping down the dust. No nuisance of offensive decay of street refuse is caused by the use of salt water. It is more economical to use salt water. (1887.)

*Summary.*—The advantages of a constant supply of sea-water to London may be thus shortly summarized:—

1. There would be less dust and smell, and more cleanliness in the streets.
2. Watering would be less frequent, and more efficient.
3. The road surface would be more durable, requiring fewer repairs.
4. The sewers would be less offensive.
5. The cost to the ratepayers would be probably a quarter, or even a third less than the present cost of water for public purposes.
6. Hospitals and schools would be provided with additional means to health.
7. Every house could be furnished with its own sea-bath.
8. The saving of fresh water would be very great, practically adding 25 per cent to the present supply.

#### DISCUSSION.

The CHAIRMAN said they were much indebted to Mr. Grierson for bringing forward this very important subject. The experiment of saline watering was tried in London some 15 years ago, when Mr. Cooper patented a method of watering streets with a solution of chlorides of sodium and calcium, claiming to get by their use a liquid which would not readily dry, and which would be so much more economical with regard to labor, as to fully repay the cost of the chemicals used. The plan was tried during one summer by the Vestry of Paddington and he took the opportunity of inspecting the result. It did precisely what had been described by the officials of the various towns referred to; it practically abolished dust, and the shopkeepers of the Harrow-road were delighted to find that their goods were no longer covered with dust. When there was any moisture in the air, the streets did not dry; and when they became dry, instead of the surface of the macadam becoming dusty, it caked, and made an admirable smooth surface for wheels. The experiment was not pursued after the period for which the first contract was made, but, he believed, its abandonment was not owing to any demerits, but depended on certain legal difficulties connected with the property in the patent. Any chemist would say that sea-water could not have any noxious effect. Nothing was said in the paper as to the prospect of this scheme being carried into effect. He should also like to know whether the £420,000 mentioned covered merely the laying of the mains shown on the diagrams, and whether any provision had been made for the vast expense which he should imagine would be required for laying fresh service-pipes to a large number of houses. On that point householders would have to remember that until the Acts under which they were at present taxed by the water companies were modified, they would have to pay just as much for fresh water as before, even though they did not use it so much, except in those cases where they could get rid of the special charge for baths.

MR. LEWIS ISAACS said such a scheme as this could not fail to interest him very greatly, and he had sent Mr. Grierson an official letter from the district under his charge, asking for further particulars, which had been answered by the engineer to the scheme very fully. Of course he was anxious to know the position, size, etc., of the mains proposed to be laid in the Holborn district, and was informed they were to be 12-inch pipes, laid under the carriage-way at a depth of 2 feet 6 inches. This point was very important, remembering the difficulties which occurred last year in many districts from the freezing of the water-mains, much to the injury of the reputation of some of the water companies; and this was enhanced when in the summer, which was exceptionally hot, the water-supply was in certain places very deficient. He congratulated the author on the comfort he had afforded them by the promise that a large quantity of water now used for non-domestic purposes would be set free and made available for household consumption. It had often struck him as a great reproach on this scientific age that we should so long continue the wasteful system of going to great expense in filtering, and rendering fit for drinking purposes, every drop of water which was used to water the streets and flush the drains. But he should have been glad if Mr. Grierson could have spoken a little more positively as to the saving which might be effected in this direction. The price paid for water for municipal purposes, was, in some cases, at any rate, not 9d., but 6d. per 1,000 gallons; and he should have liked a more definite statement than a mere opinion that the water supplied under this scheme for municipal purposes would not, at any rate, cost more than that now supplied. Looking to the fact that the water was taken from the sea, and that there were only two reservoirs in a length of about 60 miles, and one pumping-station, he should have thought the water could be brought to London at a cost which would enable the projectors to beat the

water companies completely out of the market. He should not have been surprised to hear that the cost need not be more than half. He could not speak from experience as to the suitability of sea-water for road watering, but he had seen some of the towns mentioned, and he must say the *volte face* of the authorities at Hastings within a few years was very surprising, and he thought there must be something behind which was not disclosed. He had seen the application of salt water for this purpose in four or five places, and came to the conclusion that, in the main, Mr. Grierson was right. Sea-water had a peculiar effect on macadam dust, forming a cake, which he would not say was quite so nice for draught as the result of watering by the ordinary process, but undoubtedly the effect was much more durable; it was probably within the mark to say it lasted twice as long, but he should hardly think three times. He hoped Mr. Grierson was right in saying that its application to sewage matter would be as beneficial as he stated, but he had heard doubts expressed on this point. It struck him that the salt must have a beneficial effect, though he had not sufficient chemical knowledge to speak positively, and if it could be obtained cheaply and municipal engineers had the opportunity of turning on a hydrant wherever they liked, they ought to be able to effect a great change in the condition of the London sewers. He did not know whether sea-water would be as useful in extinguishing fires as fresh water. Londoners were now so alive to anything beneficial in a hygienic point-of-view, and were so willing to spend money in luxuries, that he had little doubt of the financial success of the scheme if the pipes were once laid down. He should certainly be one of the earliest customers, and Mr. Weaver, surveyor to the Kensington district, who was a great swimmer, would, he was sure, be another. If they could be taken as fair samples of the average Londoner, there would be a good prospect of success. He might say unofficially, that so far as his own district was concerned he should offer every possible facility to the scheme.

MR. WEAVER said, looking at the question as a private individual, he thought it was quite time that London should have sea-water brought to it, as it was only 50 miles from the coast. Whether it would lead to any monetary advantage was a difficult question. They had to pay for water according to the rateable value, his contribution being £18 or £20 a year, and if he could see his way to reducing it to £10 he should yearn for the sea-water to come as quickly as possible, but he was afraid it would not have that effect. He had learned that the largest mains in his district was to be 30 inches, diminishing to 12 inches and 9 inches, and he must say he doubted whether 30 inches would be large enough if there were a large demand. As a road surveyor he remembered Mr. Cooper's experiment being tried in the southern division of his district, that gentleman having the contract for one summer. At that time the Brompton Road was laid in macadam, and the conclusion which he and his subordinates arrived at was that the salt had a very injurious effect on the macadam. It might cake the mud together, but on his roads there was very little mud left, and the effect it had was to make the macadam loose. It was consequently abandoned after the first year, and he thought it would be well for surveyors to make further inquiries on this point. He knew that at Brighton the use of sea-water was given up, not so much for the effect on the roads as for the objections of the public. The shopkeepers, especially the silversmiths, objected to it, and ladies complained of the injury to their dresses. He learned this from Mr. May, the borough engineer. Of course, in London the greater of the main roads were wood or asphalt, and on these surfaces, no doubt, sea-water would be preferable, as it kept the road damp much longer. In Kensington they only paid 6d. per 1,000 for water.

COL. ALLAN CUNNINGHAM said the most interesting aspect of the question to him was the great saving which would be effected in the use of fresh water. The time was rapidly approaching when potable water would be a most valuable commodity, as the population in all large towns kept on growing, and the means of getting fresh water did not keep pace with it, or could only be kept up by a vast expenditure; anything which could be done to husband it was most important. There was an enormous waste in filtering water until it would pass a chemical analysis as being fit for drinking, and then throwing it down the sewers. There had been a great deal of evidence from various towns as to the advantages of using sea-water, but it ought, probably, to be discounted to some extent, bearing in mind that all these towns were on the sea coast, where they would get sea-water cheap, and naturally were inclined to speak strongly in favor of it. Some disadvantages had already been referred to; a minor objection would be that in frosty weather they would feel it in their boots, and it would probably be a good thing for cobblers. Brine did not freeze very quickly, and therefore formed a much colder liquid than fresh water at the freezing point, and would be more disagreeable if one's boots got sodden. For the same reason, it would affect the feet of horses and dogs, and probably cab-ranks, where horses were kept standing, would have to be raised a little, as a matter of humanity. It was important to know how far the intake was from any possible pollution by sewage. It would also be a very expensive matter to introduce an entirely new set of fittings into houses for the use of salt water, and he feared there would not be much demand from the public for a long time, except from hotels, clubs, baths and very wealthy people.

MR. W. H. GARbutt (Vestry Clerk of Marylebone) suggested that it would be well to have some information as to the possible

effect of salt water on ordinary fittings, and whether the iron mains would not soon be rendered worthless. He had heard that some of the cast-iron supports to piers at the seaside had been seriously injured in the course of a few years by the action of salt water.

MR. MACINTYRE, as the engineer to the scheme, said he would answer some of the questions which had been raised. The mains were designed to provide 10,000,000 gallons per day, but if the demand were found to exceed that quantity, additional ones could be laid. At present the main for the intake was 36 inches. About Dorking it was reduced to 32 inches as far as the reservoir at Epsom, and from there to London, the fall being more rapid, it would be 30 inches. Salt water was more efficient in extinguishing fires than fresh. A chimney on fire could often be extinguished by putting salt on the fire, the effect being an evolution of chlorine, which choked a fire at once. Care had been taken to select a spot for the intake, at least a mile distant from any source of pollution. It was suggested that salt water might affect horses' feet and people's boots in winter, but as a matter of fact the streets were not watered in winter. He was glad to find that Major Isaacs approved of the details supplied him as to the depths of the pipes; all these details had been carefully considered, and with regard to them they were desirous of consulting the authorities of the different districts as far as possible. The present idea was to erect standards at all the principal cross streets so that the watering of the cross streets could be conveniently carried out to the distance of about half a mile from the main on each side. The castings which had been referred to were exposed to the sea-water and air alternately, which was very trying to either iron or wood. These mains would be constantly full, the velocity of flow being 160 feet a minute. There would not be the trying alteration of wet and dry; but, of course, they would wear out in time like other pipes; all that had been taken into consideration. The estimate was ample, being founded on actual tenders from eminent contractors for the different classes of work. There would be 18 or 19 miles of mains in London, sufficient to introduce the water to all the principal parts. If the use of sea-water were found advantageous, no doubt other mains would be asked for, and they would be extended by agreement with the various authorities concerned.

MR. GRIERSON said it was very encouraging to hear it suggested that a 30-inch main would not be large enough to supply the demand in Kensington. His statement as to the average price of water for municipal purpose had been called in question, but his figure was based on official returns. He was aware that in some places, and for some special purposes, it was 6d., but in other cases it went as high as 1s. 3d., and the average was within a small fraction of 9d. With regard to the effect on macadam roads, he would refer to the report from Barrow-in-Furness, which dealt with that very point. With regard to the effect on horses' feet, of course there would be no salt water in the streets in time of frost, and the surveyor of Gosport, where sea-water had been used many years, said horsekeepers had great faith in salt water for keeping the legs of their cattle in good condition. Of course that applied to the summer.

The CHAIRMAN then proposed a vote of thanks to Mr. Grierson, which was carried unanimously, and the meeting adjourned.



#### THE SOCIETY OF BEAUX-ARTS ARCHITECTS.

THE Committee on Education has to report that the judgment of the last Exhibition of Drawings entered in competition was held on the 17th of December last. The jury was composed as follows:

Prof. D. Despradelle, Mass. Institute of Technology; Prof. E. V. Seeler, University of Pennsylvania; Prof. A. D. F. Hamlin, Columbia College; Prof. C. F. Osborne, Cornell University; and Mr. J. H. Friedlander, Mr. John M. Carrère, Mr. John Galen Howard, Mr. Whitney Warren, Mr. A. L. Brockway, *Committee on Education*.

The exhibition of drawings was unusually large and of a character that should encourage the Society in its work. There were two classes.

#### CLASS A.—PROGRAMME: A FOUNTAIN AT THE JUNCTION OF TWO STREETS.

*Medals were awarded to:* A. M. Githius, University of Pennsylvania, and E. J. Willingale, pupil of Mr. Masqueray.

*First Mention.*—Arthur Shrigley, University of Pennsylvania; Carl Richardson, pupil of Mr. Masqueray.

*Second Mention.*—George C. Baum and Francis W. Bancroft, University of Pennsylvania; George M. Bartlett, pupil of Mr. Flagg.

#### CLASS B.—PROGRAMME: ENTRANCE TO A PARK.

*First Mention.*—Russell Selfridge, pupil of Mr. Masqueray, and Thomas Egleson, pupil of Mr. Flagg, by unanimous vote of the jury; C. E. Decker and Charles Hess, pupils of Mr. Masqueray; Conrad F. Knapp, University of Pennsylvania.

*Second Mention.*—Elliott E. Vernon, University of Syracuse; J. Edgar Hill, University of Pennsylvania; Ray Corwin Crosby and William Thomas Armstrong, pupils of Mr. Masqueray.

*Third Mention.*—Robert F. Daggert, Walter S. Gideon, Edgar O. Hunter and W. P. Russell, University of Pennsylvania; Charles E. Mack and George E. Sweet, pupils of Mr. Masqueray; William H. Orchard, Niagara Falls, N. Y.; R. Sheppard, pupil of Mr. Casey; James Hopkins.

The following competitors were placed *hors concours*:

W. E. Sanger: did not follow the plan.

Francis Bigelow: did not comply with the programme as to masonry posts.

Charles Bruinsmade, pupil of Mr. Flagg: character was good but no plan furnished.

R. D. Graham, pupil of Mr. Flagg: no plan furnished.

Norval Richardson, pupil of Mr. Masqueray: design was clever but no plan furnished.

Theo. Hopping, pupil of Mr. Flagg: no plan furnished.

#### THE WORCESTER CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

The Worcester Chapter of the American Institute of Architects will hold a banquet, at the Bay State House, February 27, 1896.

Architects Stephen C. Earle and Ward P. Delano were chosen a committee to revise the By-laws so as to conform with change made in Constitution of the American Institute of Architects.

Architects Stephen C. Earle and Elbridge Boyden were chosen a committee to prepare resolutions on the death of Architect A. P. Cutting which occurred last week in California.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

HOUSE OF R. MCK. JONES, ESQ., 6 WESTMORELAND PLACE, ST. LOUIS, MO. MESSRS. EAMES & YOUNG, ARCHITECTS, ST. LOUIS, MO.

[Gelatin Print issued with the International and Imperial Editions only.]

CENTRAL EXCHANGE BUILDING, WORCESTER, MASS. MR. WM. GIBBONS PRESTON, ARCHITECT, BOSTON, MASS.

THE original building was among the oldest in the city, and the progress of rebuilding in the immediate vicinity has necessitated the remodelling of the old structure, to bring it up to modern requirements. The old front was set back from the line of the street, to provide basement entrances and steps, and a new front has been built well in advance of the old, which was not demolished until the new one was complete, with sashes, floors, etc., rendering the added portion habitable. Then the old wall, with its heavy granite piers, was taken down, and the tenants who remained in possession found themselves in a building quite different in lighting, design and construction.

The interior of the building has been provided with fireproof stairs, a first-class elevator, and other conveniences of a modern building.

The upper portion of the building will be utilized for two Society halls, and the Savings Bank and National Bank have continued to occupy their old quarters on the first floor, during the rebuilding and construction of the new front, the material of which is Indiana limestone. The main entrance will really give access to an extensive new property in the rear, which may be fitted up for offices or light mechanical purposes.

A curious situation developed in the erection of this front. The adjoining owners had a building whose cornice had a projection of seven feet, and it not only extended across their front, overhanging the sidewalk, but mitred around the corner, overhanging the old, and lower, Central Exchange Building seven feet.

The owners of the cornice did not claim the right to maintain it over the new and higher building, but they desired to preserve the portion beyond the line of the party-wall and overhanging the sidewalk of the Exchange Building, cutting up against the new front seven feet. The rights of the latter owners over their own sidewalk and front light were disputed. The cornice (which is not shown on the perspective) has been cut off its full width on the party-line.

THE CITY-HALL, PATERSON, N. J. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

DETAIL OF THE SAME.

BATH-HOUSE, WARM SPRINGS, VA. MR. C. H. READ, JR., ARCHITECT, RICHMOND, VA.

[The following named illustrations may be found by reference to our advertising pages.]

THE MEDICI FOUNTAIN IN THE LUXEMBOURG GARDEN, PARIS, FRANCE.

This work, designed by De Brosse, in the Doric style, with imitations of stalagmites, between 1613 and 1624, has undergone some

changes since its erection. In 1861 the laying out of the Rue de Medicis caused it to undergo a removal of some feet, and its front has been modified by the addition of the sculptures by Ottin (a modern artist) representing Polyphemus surprising Acis and Galatea. The rear façade has also been modernized.

THE COLONNADE ABOUT THE NAUMACHIA IN THE PARC MONCEAU, PARIS, FRANCE.

ONE of the few relics of the old attractions of the Parc Monceau is this semicircular Corinthian colonnade, the columns composing which were brought either from the Château du Raincy or from the mausoleum which Catherine de' Medici had begun to build for herself and Henri II near the Abbey of St. Denis.

MONUMENT TO WILLIAM AND FREDERICK, GIEBICHENSTEIN, GERMANY.

A GROUP OF EDUCATIONAL BUILDINGS.

[Additional Illustrations in the International Edition.]

A HÔTEL FOR AN ARCHÆOLOGICAL SOCIETY. MR. ERNEST BOUÉ, ARCHITECT.

[Copper-plate Photogravure.]

CENTRAL FEATURE OF THE BUILDING OF THE CHICAGO NATURAL HISTORY SOCIETY, CHICAGO, ILL. MR. HENRY IVES COBB, ARCHITECT, CHICAGO, ILL.

[Gelatin Print.]

ENTRANCE TO THE SAME BUILDING.

[Gelatin Print.]

PICTURE ROOM: HOUSE OF THE LATE LORD FREDERIC LEIGHTON, HOLLAND PARK ROAD, LONDON, ENG. PROF. GEORGE AITCHISON, ARCHITECT.

PROPOSED NEW PREMISES, HIGH STREET, BIRMINGHAM, ENG. MESSRS. ESSEX, NICOL & GOODMAN, ARCHITECTS.

THIS building is about to be erected for Messrs. E. Fletcher & Co., upon the site of their present premises, together with some additional land at the side and rear, which has been acquired to provide extra accommodation.

The premises will have a frontage of 59 feet and a depth of 163 feet, and will comprise a large basement, 104 feet by 50 feet, with packing and receiving rooms at the back. The ground-floor shop will be 50 feet by 102 feet, by 26 feet high, and will be surrounded by a wide gallery, the centre of the shop being lit by a large lantern light, which will also assist in lighting the basement through a well-hole in the shop floor. Next the street on the first floor and leading from the gallery will be a large mantle room. The second floor (which will surround the central well-hole, lighting the shop underneath) is to be occupied by workrooms, and the third and fourth floors by assistants' living and bedrooms. The counting-house and offices, and dining-rooms and kitchen accommodation will be in a block in the rear. The front elevation will be carried out with red pressed bricks and buff terra-cotta, the tower being covered with tiles. The whole of the remaining roofs will be flat, to be used for packing-cases, etc., and a hoist will be provided for this purpose.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

#### "ELEVATOR SHAFTS."

NEW YORK, N. Y., February 5, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Responding to your wishes as stated at the end of a paragraph in your publication of January 18th last, page 26, second column, in regard to fireproofing elevator-shafts, we would call your attention to a fire-test which was made in Brooklyn, December 22, 1894, in the presence of the Chief Inspector of Buildings, local inspectors, several architects and builders. The shaft represented a dumb-waiter shaft, three feet square, constructed of frame studding 4" x 2", lathed both sides with wire-lathing, and plastered in the ordinary brown plaster without any hard finish. Between the wire-lathing the space of three inches was filled-in with mineral wool; total thickness of the walls was four and one-half inches. This flue or shaft stood eighteen feet from base to top and was piled with wood inside and out, set fire to and kept burning for forty minutes, which was considered to be long enough by the inspectors, architects and builders present; then the shaft was pulled down and critically examined as to its fire-resistance, with the result as given in the subjoined letter of the Chief Inspector to Commissioner Bush of the Building Department, Brooklyn.

DEPARTMENT OF BUILDINGS, BROOKLYN, N. Y., December 24, 1894.

## COMMISSIONER OF BUILDINGS:—

Sir, — As per instructions from you, on Saturday I visited the lot on the south side of Jefferson Avenue, about two hundred feet east of Bedford Avenue, and found there a piece of work similar to a dumb-waiter shaft, three feet square and fifteen feet high, standing on four brick piers twelve inches high. It was constructed of joists covered with American mineral wool, one-half of an inch thick on each side with wire-lath over that, and the wool filled-in between the studs. The inside of the shaft was plastered over about a quarter of an inch thick with a coat of brown mortar and the outside had a half of an inch coat of same. Fire was started inside of the shaft with several barrels of wood at 2.05 P. M., and kept up until 2.35, during which the outside of the shaft was cold except in a few spots which were slightly warm. The structure was then torn apart, and the inside was in a perfect condition, not even scorched.

It is certainly non-combustible and a valuable material for fireproofing.  
(Signed) WM. H. HAUXHURST, Chief Inspector.

Some of the architects said that such construction should by law be made imperative, especially in hallway partitions of tenement-houses, so as to give the inmates ample time and opportunity to save themselves and some of their belongings by other means than the perilous fire-escapes.

The value of mineral wool as a check to the spread of fire, and as an insulator of heat and cold is not yet fully appreciated by architects and builders, but many do so appreciate it as to specify and use it in almost all their buildings, not only of frame but also of brick and stone construction. In the latter kind it is generally used for the deafening of floors and under the roofs; this gives them cool and pleasant upper rooms in the summer and warm ones in the winter.

UNITED STATES MINERAL WOOL CO.



BOSTON, MASS.—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895:* at the Jordan Art Gallery, 450 Washington St.

*Fifty-third Exhibition, Oil-paintings and Sculpture:* at the Boston Art Club, January 13 to February 15.

*Pictures by Childe Hassam:* at the St. Botolph Club, January 27 to February 15.

*Photographic Views lent by Walter G. Chase, and Flash-light Studies by Miss Bertha Lothrop:* at the Boston Camera Club, 50 Bromfield St., February 6 to 15.

*Pastels by J. Wells Champney:* February 10 to 22, also, *Water-colors by Miss Florence Robinson:* February 10 to 15, at Williams & Everett's Gallery, 190 Boylston St.

BRIDGEPORT, CONN.—*Second Annual Exhibition of Pictures:* at the Public Library, January 25 to March 15.

CHICAGO, ILL.—*Works by Gustave Doré:* January 21 to March 21, *Swedish Paintings:* February 4 to March 1, at the Art Institute.

CLEVELAND, O.—*Joint Exhibition of the Cleveland Art Association and the Cleveland Architectural Club:* at the Garfield Building, opened February 10.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Twenty-ninth Annual Exhibition of the American Water-color Society:* at the National Academy of Design, February 3 to 29.

*Eleventh Annual Exhibition of the Architectural League:* at 215 West 57th St., February 15 to March 9.

*Portraits and Pictures by R. W. Vonnor:* at the Durand-Ruel Galleries, 389 Fifth Ave., February 3 to 15.

*Symbolistic Paintings by P. Marcus-Simons:* at the Avery Galleries, 368 Fifth Ave., February 7 to 22.

PHILADELPHIA, PA.—*Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts:* opens December 23, closes February 22.

PROVIDENCE, R. I.—*Water-colors by Ross Turner:* at the Rhode Island School of Design, February 8 to 22.

SPRINGFIELD, MASS.—*Nineteenth Annual Exhibition of Paintings:* at James D. Gill's Gallery, until February 29.

ST. LOUIS, MO.—*Drawings of London Society, by George Du Maurier:* at the Museum of Fine Arts, until February 22.



THE AMPHITHEATRE AT CAGLIARI, SARDINIA. — Among its relics of antiquity the amphitheatre of Cagliari is probably the most interesting, as it is certainly the largest. The Canon Spano, who has done so much for Sarde archaeology, was the chief agent of its clearance from the immense amount of rubbish which had been cast into it during ten

or eleven centuries. As a rubbish pit it no doubt served excellently from the end of the eighth century onward. The last record of its use dates from the year 777, when bull-fights were held here to celebrate the temporary expulsion of the Saracens from the island. Thenceforward the citizens had little peace from their enemies, and the original purpose of the amphitheatre was probably unheeded. Unlike most theatres, this of Cagliari is an excavation not a superstructure. It reminds one of the Odeon of Herod Atticus in the side of the Acropolis at Athens. The rude outline of it was formed by a watercourse which existed here. The tufa yielded to the autumnal rains, even as it still does; and when the hint had taken root in the minds of the Cagliariar architects, it was easy to extend the area of dilapidation. It is not a very large excavation, though it is estimated that it could seat twenty thousand spectators. What it lacks in breadth, however, it gains in height, its elevation being about a hundred feet. Perhaps the most interesting part of it is the series of corridors and chambers which burrow under the lower tier of seats. These were concerned with the wild beasts brought here to die. The iron rings to which they were tethered may still be seen welded into the matrix. The Cagliari amphitheatre is not on show at half a franc or a franc a head. It is left very much indeed to itself. Under this hot sky it is, moreover, a trifle arduous to explore the excavation thoroughly. The seats are high, and there are fissures in the masonry which it would never do to slip into. Here and there a clump of cactus or prickly pear has perched itself above the theatre. A little boy may perhaps be seen amusing himself by leaping from seat to seat, and shouting to snare the echo. Else you and the amphitheatre and the blue sky which domes it are likely to be very much alone. Bees and butterflies and lizards are, of course, no account. Of these, however, there will probably be no lack. — *Frank Leslie's Monthly.*

THE ITALIAN FOUNTAIN. — The great creation of this Bernini School, which shows it as the sculpture born of gardens, is the fountain. No one till the seventeenth century had guessed what might be the relations of stone and water, each equally obedient to the artist's hand. The mediæval Italian fountain is a tank, a huge washtub fed from lions' mouths as if by taps, and ornamented more or less with architectural and sculptured devices. In the Renaissance we get complicated works of art — Neptunes with tridents above sirens squeezing their breasts, and cupids riding on dolphins, like the beautiful fountain of Bologna; or boys poised on one foot, holding up tortoises, like Rafael's Tartarughe of Piazza Mattei; more elaborate devices still, like the one of the villa of Bagnaia, near Viterbo. But these fountains do equally well when dry; equally well translated into bronze or silver, they are wonderful salt-cellars or fruit dishes; everything is delightful except the water, which spurts in meagre threads as from a garden hose. They are the fitting ornaments of Florence, where there is pure drinking water only on Sundays and holidays; of Bologna, where there is never any at all. The seventeenth century made a very different thing of its fountains — something as cool, as watery, as the jets which gurgle and splash in Moorish gardens and halls; and, full of form and fancy withal, the water never alone, but accompanied by its watery suggestion of power and will and whim. They are so absolutely right, these Roman fountains of the Bernini School, that we are apt to take them as a matter of course, as if the horses had reared between the spurts from below and the gushes and trickles from above; as if the triton had been draped with the overflowing of his horn; as if the Moor with his turban, the Asiatic with his veil, the solemn Egyptian river-god had basked and started back with the lion and the sea-horse among the small cataracts breaking into foam in the pond, the sheets of water dropping, prefiguring icicles, lazily over the rocks, all stained black by the north winds and yellow by the lichen; all in those Roman gardens and squares, from the beginning of time, natural objects, perfect, and not more to be wondered at than the water-encircled rocks of the mountains and seashores. — *Vernon Lee in Longman's Magazine.*

BURIED IN A TREE. — One of the most curious mausoleums in the world was discovered the other day in an orchard at the village of Noebdenitz in Saxe-Altenburg. A gigantic old oak-tree, which a storm had robbed of its crown, was up for public auction. Among the bidders happened to be Baron von Thummel. The Baron, who lives on a neighboring estate had ridden to the auction place quite accidentally. As no one seemed eager to help out the auctioneer, he started the bidding at a small figure. This aroused the peasants' suspicion; they thought there might be some value in this old tree, and the battle raged for an hour, until finally the tree was knocked down to the Baron for \$50. Upon his arrival at the castle he told an old servant of his purchase, describing the tree and its situation. The old servant said he remembered attending the funeral of a Baron Thummel seventy or eighty years ago, and that the body had been buried in a 1,000-year-old oak, then standing on a plot of ground belonging to the parsonage. Investigation proved that the orchard had once been the property of the village church, and that at one side of the old oak was an iron shutter, rusty and timeworn, that the people of the village had always supposed to have been placed there by some joker or mischievous boys. This iron shutter proved to be the gate to the mausoleum of Baron Hans Wilhelm von Thummel, at one time Minister of State of Saxe-Altenburg, who died in 1824 and wished to be buried "in the 1,000-year-old tree he loved so well." The oak, which measures about ten feet in diameter, has for over a century been hollow, so it was learned, beginning at a point about five feet above its base. In this hollow Baron Hans caused to be built a sepulchre of solid masonry large enough to accommodate his coffin. The coffin was placed there, as the church records show, on March 3, 1824, and the opening was closed by an iron gate. In the course of time a wall of wood grew over the opening, which had been enlarged to admit the coffin and workmen, and for many years it has been completely shut, thus removing the last vestige of the odd use to which the old tree had been put. — *Exchange.*



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FEBRUARY 22, 1896.



## SUMMARY:—

Proposal to make Mr. Hunt's Central Park Gateway his own Memorial. — Delacroix's "Pietà" to be purchased as a Memorial of Martin Brimmer. — Death of A. P. Cutting, Architect. — The T-Square Club to re-design certain Philadelphia Buildings. — The Central Labor Union seeking to replace Strikes by Arbitration. — Shipment of American Roofing Slate to Wales. — British Criticism of the Qualities of American Roofing Slate. — Lord Leighton's Paintings. — The British Empire Exhibition at Montreal this Summer. — Result of the New York City-hall Competition. . . . .	81
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**T**HE New York Architectural League appointed a committee last September to submit plans for a monument to the late Richard Morris Hunt, to take the form of a gateway to the Central Park. The committee has now reported, proposing a very satisfactory solution of the problem, consisting in carrying out Mr. Hunt's own design, made thirty years ago, for the gateway at the entrance to the Park on Fifth Avenue and Fifty-ninth Street. It will be remembered that Mr. Hunt made designs for gates at all the entrances to the Park, forming a very interesting and varied series of studies. None of these has as yet been executed, and it would be a most appropriate way of honoring his memory to have the most important one carried out in an adequate and befitting manner. By the custom of the Park Commission, no structure connected with the Park is allowed to commemorate by name any person, living or dead; but, as the committee say, it is generally known that the gates were designed by Mr. Hunt, and the guide-books of the future will keep that fact before the public mind; so that there is no real need of inscribing the name of the artist upon the work. To carry out the design completely, including suitable sculpture, as intended by Mr. Hunt, will cost about one hundred and ninety thousand dollars, or more, if bas-reliefs are placed on the pedestals of the statues; but it seems probable that the city would contribute to the expense.

**T**HE late Martin Brimmer was so closely identified with the Boston Museum of Fine Arts at the time of its first incorporation that some of the friends of the Museum wish to have his name permanently connected with it by some sort of memorial. With this view, they propose to purchase the "Pietà," of Delacroix, which has been secured for the purpose, at the cost of about twenty thousand dollars, and present it to the Museum as a Brimmer Memorial. More than half the money necessary for completing the purchase has been already subscribed, but further contributions will be necessary, and the committee in charge of the matter would be glad to receive subscriptions, however small, from all who would like to associate themselves with what is no less a benefaction to the public than a recognition of the virtues of Mr. Brimmer. If

more money should be subscribed than is needed for the purchase of the picture, the surplus will be applied toward the debt of the Museum, now amounting to about fifty thousand dollars, which Mr. Brimmer, in his lifetime, earnestly wished to see paid. The names of all contributors will be published in the next Annual Report of the Museum, without mentioning the amount of the individual contributions, simply as a list of the friends of Mr. Brimmer, and of the Museum, who have been pleased to avail themselves of this method of showing their regard for both.

**W**E learn with much regret of the death, at Los Angeles, California, of Mr. Amos P. Cutting, of Worcester, one of the best-known architects of Central Massachusetts. Mr. Cutting took great interest in professional matters, and was a faithful and highly-esteemed member of the American Institute of Architects, whose high standard of professional ethics he was steadfast in maintaining. Although a man of quiet ways, he had a very large practice, and is said to have built seventy-five churches in and about Massachusetts.

**T**HE T-Square Club, of Philadelphia, has announced a scheme which may be made of much value to students.

The object of the movement is to exercise the critical faculty of the younger architects; and, with this view, a series of competitions is to be held among the members of the club, each being devoted to the "re-designing" of some building of objectionable exterior. Each competitor is to be furnished with a printed slip, describing, approximately, the requirements which the building was originally intended to fulfil, and a brief criticism of the existing design, together with a photograph of the street front. The competitor is then to improve the plan and elevation to the best of his ability. An annual medal is to be awarded for the most successful solution of the problem, but with the reservation that it will be counted as a merit to follow, as closely as a due regard for proper planning will permit, the present arrangement of the structure treated. It is intended to publish in the newspapers, each year, reproductions of the three best designs, side by side with a cut of the actual building, so that the public, which is apt to find architects' criticisms of existing buildings rather incomprehensible, may see for itself what these criticisms mean. Both for the public and the students, this ought to be a valuable exercise. The only difficulty that we see in the way is a possible objection to such publicity on the part of the designer of the building thus held up for criticism; but a little tact ought to make it easy to avoid misunderstandings of this sort.

**A** REMARKABLE discussion took place the other day in New York, in the Central Labor Union, on the subject of strikes. A delegate from the Electrical Workers' Union announced that he was about to seek authority from his union to move for an amendment to the Constitution of the Central Labor Union, to the effect that any constituent union of that body which, having a grievance against an employer, shall fail to submit such grievance to arbitration before going on strike, shall not receive support from the Central Labor Union. In support of his proposition, the delegate, Mr. Hoadley, said that, under the present conditions, strikes were ordered without reference to any laws or rules, and, before one knew it, ten or fifteen thousand men had become involved in sympathetic strikes; and it seemed to him that the time was ripe for such an amendment to the constitution. Another delegate, Mr. Lloyd, of the tin and sheet-iron workers', supported the plan, saying that most of the labor leaders recognized that arbitration was necessary. Mr. O'Brien, the President of the Board of Walking-Delegates, opposed the amendment, as did also Mr. Fitzgerald, who thought that, if arbitration were provided for, the employers should be given only forty-eight hours in which to consent to it. Delegate Edwards, of the tile-layers' helpers, said that arbitration must come, for the day of strikes was about over; and, after further discussion, the matter was referred to the Building Trades' section of the Central Labor Union, with instructions to report within a month.

**W**HATEVER may be the present action of the Central Labor Union on the matter, it is clear that the more sensible members of the building-trades in New York have at last determined to rid themselves of the tyranny which

has so constantly and cruelly used them to promote private ambition. Under the most transparent pretexts of grievances, thousands of men have every year been deprived of their employment, apparently with no object whatever, except to display the power of the walking-delegates before the public. That some of them should rebel is natural, but resistance has hitherto usually taken the form of the establishment of new unions, not affiliated with the Central body, and, in consequence, relentlessly persecuted by it. Now, disaffection has fairly broken out in the Central Labor Union itself, and the struggle which must ensue between the thoughtful and clear-headed members, and those who, from self-interest, or from mere love of quarrels and disturbance, prefer the old order of things, will be interesting to witness.

THE *British Architect* conveys a piece of news of some importance to this country, in a paragraph in which it says that several cargoes of American roofing-slate have recently been landed at Cardiff, in Wales, and at other British ports. It is not long since Welsh slates were imported into this country in considerable quantities, in consequence, as was said, of an overproduction in Wales, which made it necessary to get rid of the surplus at any price that it would bring. Now, the tables seem to be turned, and, as the *British Architect* understands, the American quarrymen intend to make a systematic effort to introduce their goods into the foreign market. According to the same authority, however, the Secretary of the North Wales Quarrymen's Union thinks that American competition is not to be feared, for reasons which will sound curiously to our architects and other users of slate. This gentleman says that the American slate "will not stand the test of our changeable climate, both in regard to color and durability." That the English climate is more changeable than that of this country is certainly a new idea. It is only a day or two since the weather reports chronicled a fall of seventy-five degrees in temperature within twenty-four hours near the slate-quarry region of Pennsylvania, and it is very doubtful whether any English "changeableness" surpasses this. In fact, as architects know, the quick transitions from a warm southerly rain to Arctic frost, which characterize the climate of our country, are extremely trying to all sorts of natural and artificial stone, and particularly so to such materials used for roofing. We knew a case where the imported English tiles, used for roofing a costly building, were removed with a shovel after their first winter in the climate of Connecticut, and it is notorious that neither English terra-cotta nor English "rubbing" brick will bear exposure to our frosts. If, therefore, a roofing-slate will bear without injury the frosts of our winters, which often burst to pieces freshly-quarried blocks of stone, it is, at least, probable that they will endure the soft mists of England sufficiently well to be salable in that country.

AS to the other objectionable qualities which the Welsh quarrymen attribute to American slates, the same may be said as in regard to their durability. The *British Architect* is informed that roofing-slate in America "have to be stacked under cover to prevent their color going," and "when required for permanent structures have to be turned out of a special thickness from one-eighth to one-quarter inch." Most architects would not regard one-eighth of an inch as a very "special thickness" for the roofing of a "permanent structure"; but quarrymen, in this country as, probably, in Wales, require to be looked after rather sharply to prevent them from splitting their valuable material much thinner; and, so far as we have seen, the owners of the Pennsylvania quarries of repute are willing to take the risk of furnishing a roofing-slate considerably thinner than the average Welsh slate. As to the interesting story about storing American slates under cover, to prevent them from fading, we can only surmise that the Welsh quarrymen with whom the editor of the *British Architect* conversed must have recalled a reminiscence, twenty-five years old, or so, of the Vermont slates of a past generation. These productions were, it is true, inclined to change, on exposure, from purple to dull green; but purple Vermont slate are not much used now, even here, and it is not likely that any would be exported; while the green Vermont slate, and all the black Pennsylvania slates of any reputation, are substantially unchangeable in color. The same Welsh quarryman thought that, if the American slates were to be sold in England at the low price asked for the sample cargoes the "American stocks would soon be depleted"; but there is a great deal of slate

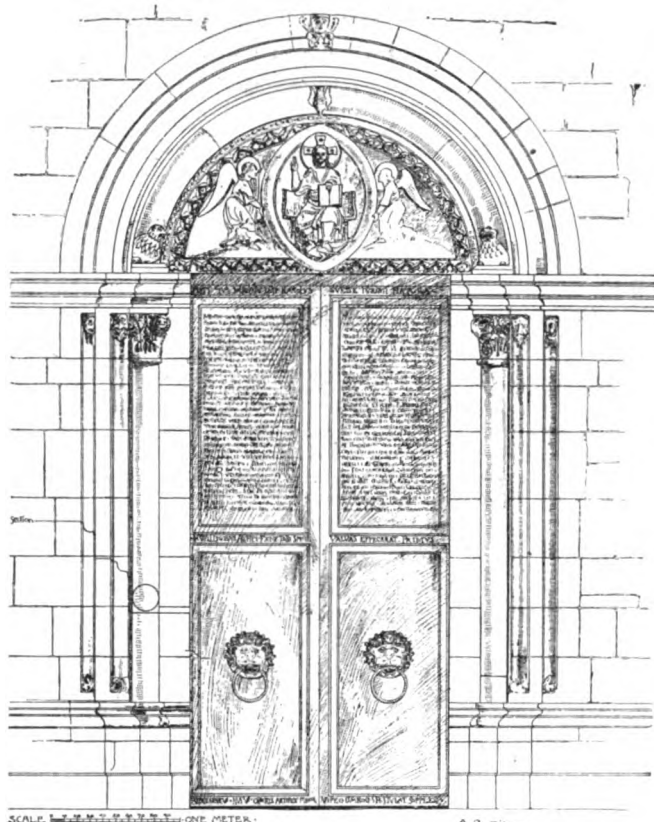
left to America; and if our English cousins will apply to the slates that they receive from us the same tests that we use, and that they apply to their own, they may be reasonably sure of getting a reliable material, at, perhaps, a moderate price, while for some varieties, such as our best red slate, there ought to be a good demand in Great Britain.

THE *Builder* gives us an interesting and appreciative criticism of the late Lord Leighton's work as an artist. To Americans, his painting is more familiar than that of most other English artists, through the ceilings executed for Mr. Marquand's house in New York, which were exhibited at the Royal Academy before they were sent here, and have not only been shown to thousands of visitors, but have been frequently published, in more or less perfect form. Although these ceilings are purely decorative, and thus a little apart from Lord Leighton's ordinary work, they show his strongest characteristics, the artistic propriety, the knowledge of form and color, and the faithfulness to the Classical ideal, which mark all his paintings. The *Builder* says, with much force, that Leighton's work never excited much sympathy among the British public. The Briton wants a story in connection with his pictures, and Leighton never told stories; form, light and shade, color and composition were enough for him, without any story. This, it is hardly necessary to say, is the orthodox French view of painting, and Lord Leighton was better understood by the French than the English, although the French critics found him cold, and compared him with their own correct, but unimpassioned Bouguereau. However, Leighton was a man of more force than his French rival, and his pictures, cold as they may be, have a certain nobility which is wanting in Bouguereau's. In many ways, apart from his painting, Lord Leighton was a man of great mark. Some years ago, he surprised the artistic world by exhibiting a piece of sculpture, the "Athlete," which the *Builder* considers the greatest of all his productions; and he studied architecture with an intelligence and care which the *Builder* illustrates by speaking of his criticism of the unconstructional character of the arcading of the front of Strasburg Cathedral, which has to be held to the masonry behind it by iron ties to keep it in place.

THERE is to be in Montreal this year, beginning May 24, and ending October 12, an exhibition, known as the "British Empire Exposition." This name, as it appears, is not given to the affair because it is to be a display of British goods only, but in commemoration of the fact that Canada is a part of the British Empire; and, so far from being confined to products of that empire, the exhibition will, it is hoped, include objects from all parts of the world. Among the departments will be one devoted to the fine-arts, among which architecture is to find a place; and architects are invited to contribute drawings, which, if accepted, will be collected, transported and insured at the expense of the Exhibition, carefully guarded and safely returned. It is expected, as we are informed, that "several millions of people, at least," will visit the Exhibition, attracted, not only by the exhibits, but by the buildings, which "will be of the most unique and beautiful descriptions," and the "artistic and beautiful" laying-out of the grounds, which comprise sixty acres at the foot of Mount Royal. Mr. Thomas T. Stokes, 88 Boylston Street, Boston, is the Commissioner-General for New England, and will furnish further information on request.

THE long impending and scandalously delayed decision upon the "Tamany" competition for a new municipal building in City-hall Park, New York, has been at length announced. Apparently, if there had been no obstructive legislation, the erection of the new building would have been entrusted to Mr. J. R. Thomas of New York, as to him is awarded, in lieu of a full commission, the extra consolation-prize of \$7,000. The five equal prizes of \$2,000 each, offered under the original terms of competition, are awarded to Messrs. E. P. Casey and Ernest Flagg, New York; Rankin & Kellogg, Philadelphia; Gordon, Bragdon & Orchard, Rochester, and P. D. Weber, Chicago. With the exception of Mr. Thomas, all these men are amongst the younger and less well-known members of the profession, and the originators of this competition and the supporters of the competitive system may allege that through this public competition their several merits were discovered — although some of them have had the fortune to be "discovered" once or twice before by an identical process.

## DOORWAYS OF THE CATHEDRAL OF MAYENCE.



North Door.

THE following historical outline is in the main translated from "*The Cathedral of Mainz*," by Herm. Emden, Mainz, 1855. The few interpolated notes of the translator will readily separate themselves.

Among the architectonic monuments of Western Europe none is, perhaps, more remarkable than the Cathedral of Mayence, whose great antiquity, the different epochs which have seen its construction in progress, and the peculiar character of its plan, mass and detail, give it rank among the most celebrated of extant mediæval buildings. The archæologist finds it a rare volume.

The foundation of the cathedral dates back to the brilliant era of the Othos. In 978 A. D., Willegis, Archbishop of Mayence and Chancellor of the Empire, began a church which was completed in 1009. The edifice was destroyed by fire on the day of its dedication, through some accident connected with a great illumination in honor of the occasion.

This first structure was a simple basilica under a wooden roof, as were all other churches of the period, with the exception of some baptismal chapels.

Willegis began at once to rebuild. He died two years later. In 1024 the restoration was so far advanced as to permit the coronation of Emperor Conrad II in the cathedral.

The third successor of Willegis, Archbishop Bardo, finished and consecrated the building.

The new edifice also was a flat-roofed basilica, as were the then cathedrals of Speyer and of Limbourg in the Haardt, founded about the same time — 1030 A. D. — by Conrad II.

The only existing remains of Bardo's church are the two stair-towers flanking the north and south transepts of the east choir, in which we see the severely simple style of the first half of the eleventh century. After lasting but forty-four years, the new cathedral was destroyed, with three other churches, by a fire which swept a section of the town. It was again rebuilt with but small changes.

In 1135-36, Archbishop Adalbert I, of the house of Saarbruck, built a chapel to Saint Gothard, which has been preserved intact to our own time. This little chapel, one of the most interesting in Germany, was consecrated by Bishop Bocco, of Worms, in 1138 A. D. It formed part of the archiepiscopal palace, and was the private chapel of Adalbert and his successors. It is at the angle of the principal front, and consists of two chapels, one above the other. Each has three naves — a nave and two aisles — separated, in the lower chapel, by massive square pillars, in the upper one by Ionic capped columns, and both are vaulted.

This chapel was scarcely completed when the cathedral was destroyed, with a part of the town, by a new conflagration, in 1137 A. D. Although there is no record of the rebuilding, it was, doubtless, begun at once on lines denoting the advance which had been made at that time in ecclesiastical architecture. The simple basilica with its flat roof of wood had disappeared, to give place to a cathedral of three naves divided by massive pillars and covered by

heavy cross-vaulting in stone. It is this church, in its essential members, which exists to-day. The pillars, the side walls of the main structure, and the whole of the eastern choir, were part of it.

## THE EASTERN DOORS.

To this period — 1130-1150 — belong the two eastern doors, of the southernmost of which a drawing is given, the two sides of the fore-choir (with their capitals of Corinthian form), the vestibule (Romanesque caps and frieze of eagles and centaurs), and the colonnade surmounting the fore-choir.

A few decades after its completion, the cathedral was again wasted by a great fire which consumed the archives, the library, and a great part of the ornament of the church, and so heated the vaulting and much of the side walls that it was feared the main edifice must fall.

Archbishop Conrad, of Wittelsbach, at once began the restoration, but a crusade which he undertook in 1197 interposed to delay the work, and his death, in the year 1200, left it uncompleted. A record of the ravages of a great tempest in the year 1196, including mentions of injury to the tower above the choir, proves that so much of the building was already restored at that time.

This fourth burning was followed by restoration and enlargement. The damaged walls were rebuilt for their entire length, in some parts from the very foundations, an evidence of which is found in the leaf carved on the bases of the half columns in the angles, from the third pillar on the north side and from the fourth on the south, this ornament belonging to the period between 1140 and 1225. The engaged columns in both side walls have capitals in the style of the early twelfth century.

## THE NORTH DOOR.

On the market side, or north, a doorway was made in which the mouldings on the edges of the pillars, the profiles of the concentric arch rings, the leafage of the capitals and the ornamentations of this leafage with pearls, are characteristic of the work of the period from 1200 to 1225 A. D. The capitals are very like those of the south transept door of Strasbourg Cathedral.

The great bronze doors which hang in this portal were cast in the time of Willegis, as we learn from the inscription upon them, which also, most fortunately, contains the name of their architect and sculptor cut into the lower rail — "*Berengerus hujus operis artifex*" — who thus wisely placed himself among the immortals.

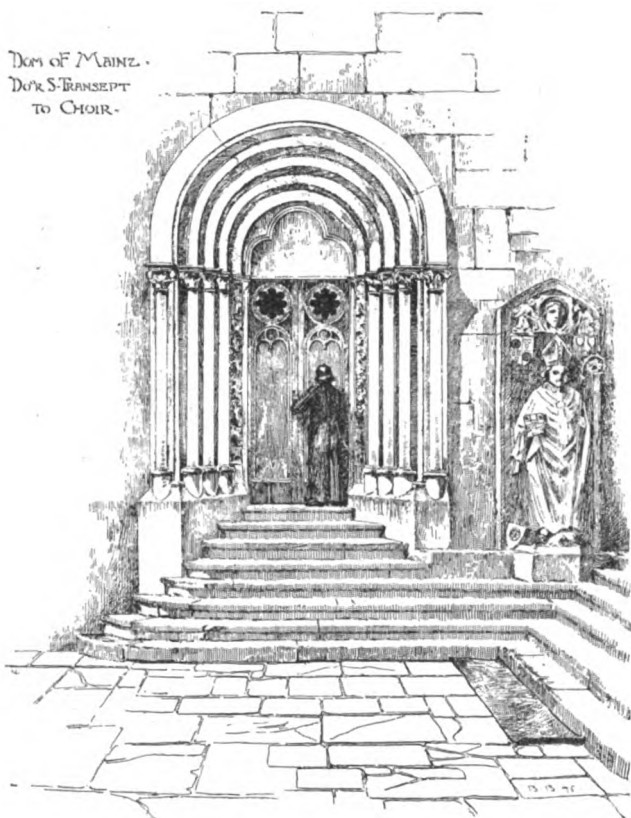
The vaulting of the principal nave, damaged by fire, was replaced by solid double arches with ogival cross-ribs and bosses carved in the dominant style of the early thirteenth century. These arches were



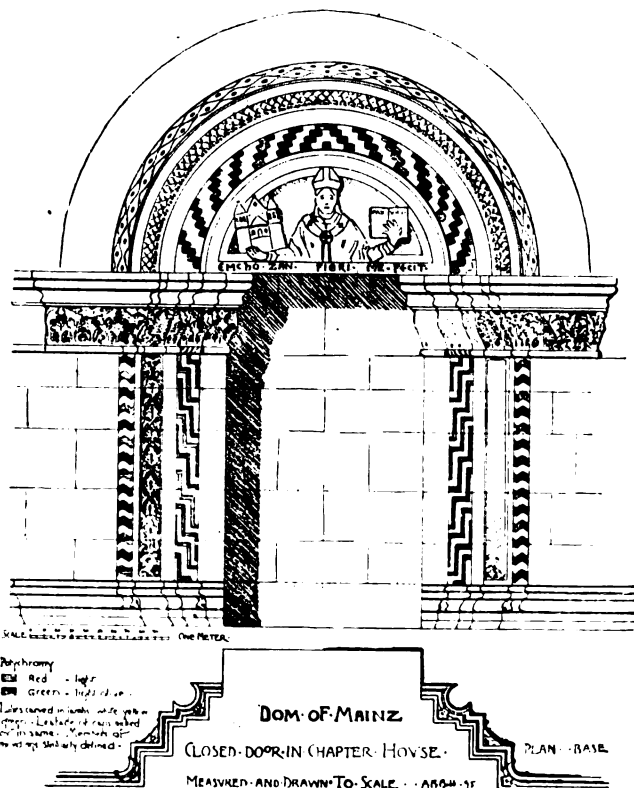
slightly pointed at the crown to strengthen them to bear the heavy masses above. Elsewhere the half-circle in its pure form is retained. The vaults of the side naves, or aisles, have no ogive cross-ribs, but sturdy round arches whose small span precludes the idea of pointing at the crown for additional strength.

The galleries which form the second story of the east transept, their vaults resting upon isolated columns, seem to belong to the same period.

The church was enlarged in this restoration. The western transept, begun in 1200, was finished in 1239. The Lombard Roman-



esque style in its final and richest development is seen in this part. Here is the semicircular arch with the pointed double arch, while in the highest part of the structure, the cupola, we find the ogival form. That the arms of the western cross, the transepts, were completed before 1228 there is proof in the record of Archbishop Sieg-



fried's consecration of the altar of St. Bartholomew in the north transept in that year.

In 1233 this prelate exhorted the faithful to make generous donations to the funds of the Cathedral, the completion of which, from its own revenues, would require many long years. His appeal

effected the completions of the work in six years, and the new building was consecrated July 4, 1239.

#### THE SOUTH CHOIR DOOR.

To the last period of building belongs the interesting door giving from the south transept into the choir niche. In this portal are united all the features of the transitions from Romanesque to the light forms of the last half of the thirteenth century.

The jambs are adorned with slender columns, whose bell capitals, enriched with crisp leafage and oak buds, support concentric round arches, slightly stilled and suggesting the horse-shoe form, similar to those of the south portal of Strasbourg Cathedral.

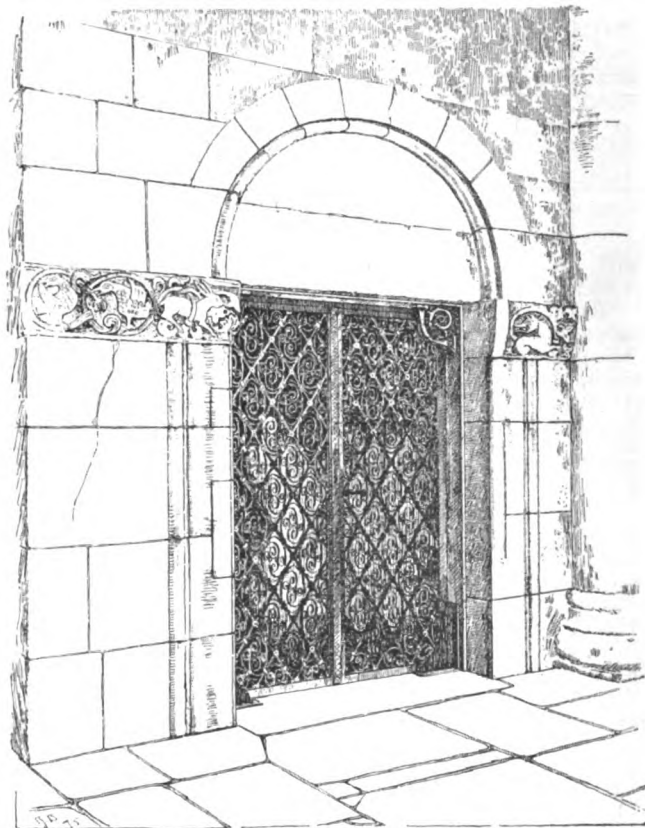
#### DOOR IN THE CHAPTER HOUSE.

The Chapter-house — Locus Memoræ — between the south nave and the cloisters was probably built between the years 1220 and 1225.

The great half-circle sweep of the ceiling vault, and great ribs springing from attached columns of low height and massive thickness set in the four corners of the room, recall the Spanish Chapel, the Chapter-house of S. Maria Novella in Florence — one of Mr. Ruskin's enthusiasms. The two chapels were built in the first quarter of the thirteenth century.

The capitals of these columns are mere cubes, and their leafage contains the pearl ornament which we have already described as peculiar to the period.

The doorway, now built up, from the Chapter-house into the south aisle is very interesting to the architect. The carved ornament is



Door to the Crypt.

freely treated after motives of lilies, ferns, gnomes and water-sprites. On the field of the arch is carved in high relief a bust of St. Martin, the patron.

The saint holds the book in his left hand, in the right a model of the cathedral. One reads below: "EMICHO·ZAN·FIERI·ME·FECIT." Emicho was a citizen of Mainz, of a patrician family mentioned in thirteenth and fourteenth century records. The present striking polychromy of the door follows the old coloring. In the parochial Church of Andernach [1207] the south door shows ornament very similar to that described above.

A. B. BIBB.

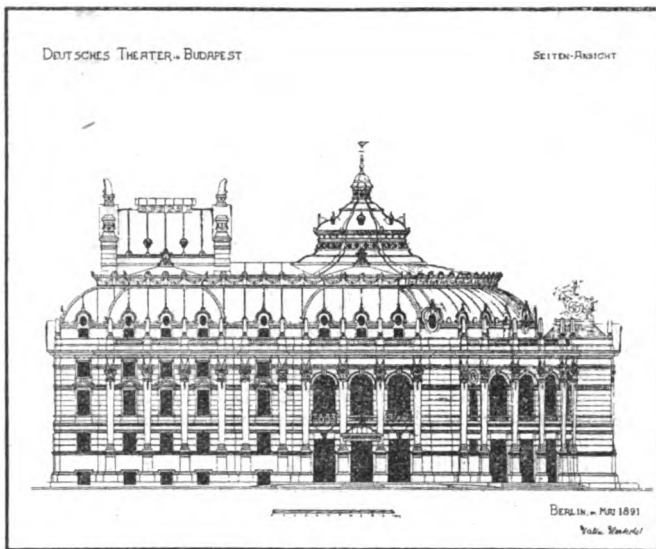
**CORRECTIONS.** — The publication of the foregoing article affords an opportunity of calling attention to a mistake made in our issue for February 8th last: It is so much a matter of course to assume that drawings submitted for publication are properly inscribed that it escaped our notice that a general view of the cathedral and town of Mayence was published as if it depicted the town of Frankfort. Our readers may find it worth while to make the correction upon the title of the drawing so published.

An error also occurred in giving the name of the architect of the Berlin Cathedral, in our issue for January 18th, as Roschdorff instead of Raschdorff.



THEATRES.<sup>1</sup>—XXIII.

## THE GERMAN THEATRE, BUDA-PESTH.



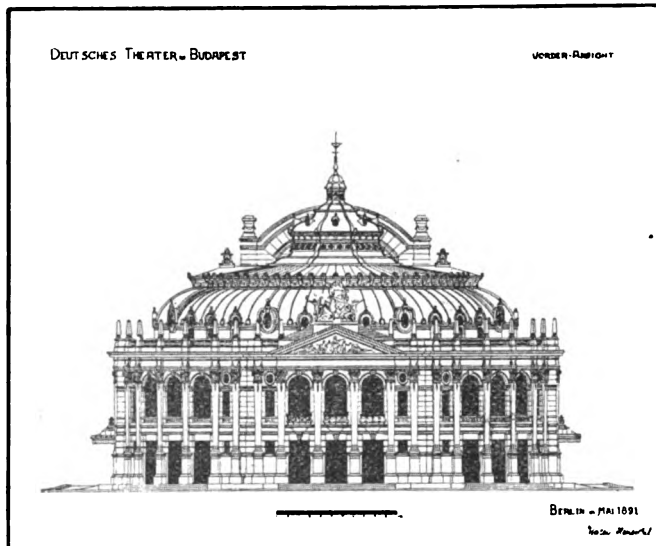
THE design for the German Theatre, Buda-Pesth, has been prepared by Mr. Hentschel, architect, of Berlin.

This theatre is about to take the place of the one which was burned down, and is to form one of a very large group of theatres which have sprung up of late years in Buda-Pesth through a strong revival of the dramatic art in that city.

Buda-Pesth has at present a large new National Opera-house lately built by the architect, Mr. Nicholas von Ybl; there is also the old National Theatre and the Hungarian popular play-house known as the People's Theatre. This People's Theatre is not however a people's theatre in the same sense as the one at Worms, for it is not one built by the people, it is merely one that caters to the popular tastes of the citizens.

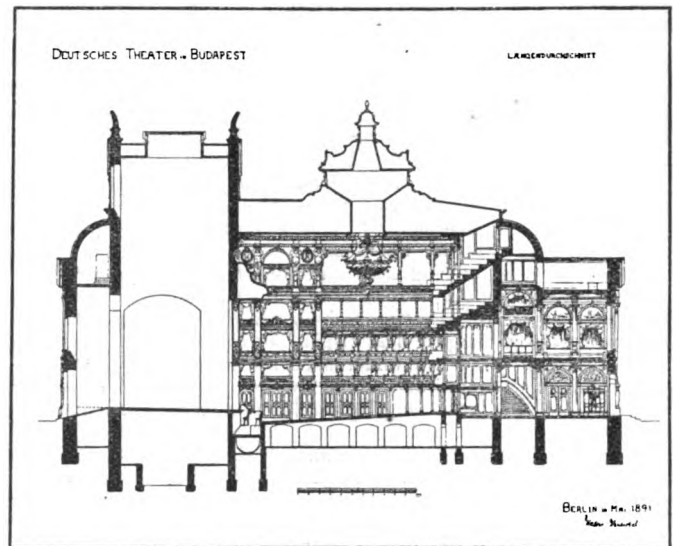
The Hungarian Theatre was erected from a design by Messrs. Felner & Hellmer, the noted theatre specialists of Germany. In Buda-Pesth the same firm of architects have also lately built a large Variety Theatre, as well as a house for Comic Opera. From these facts, it will be easily gathered that the spirit of theatre-building has been a strong one of late years in Buda-Pesth, which is a town of an advanced and go-ahead character.

In matters of theatres and theatre-fires, several examples have been pointed out as desirable lessons for those interested in theatre construction and fire extinction. No less an authority than Captain Sir Eyre Massey Shaw, writing on the theatre-fires of 1889, speaks of one that occurred on January 26, 1889, in the Buda-Pesth Opera-house, as follows:—"The house was crowded, and every one was watching attentively for the first note of music, when flames were seen issuing from the prompter's box, and the audience at once arose, and very naturally made a frantic rush for the doors, which audiences invariably do when the flames are in sight, as they were on this occasion. The firemen in attendance were instantly on the spot and soon extinguished the fire; indeed their action was so prompt in



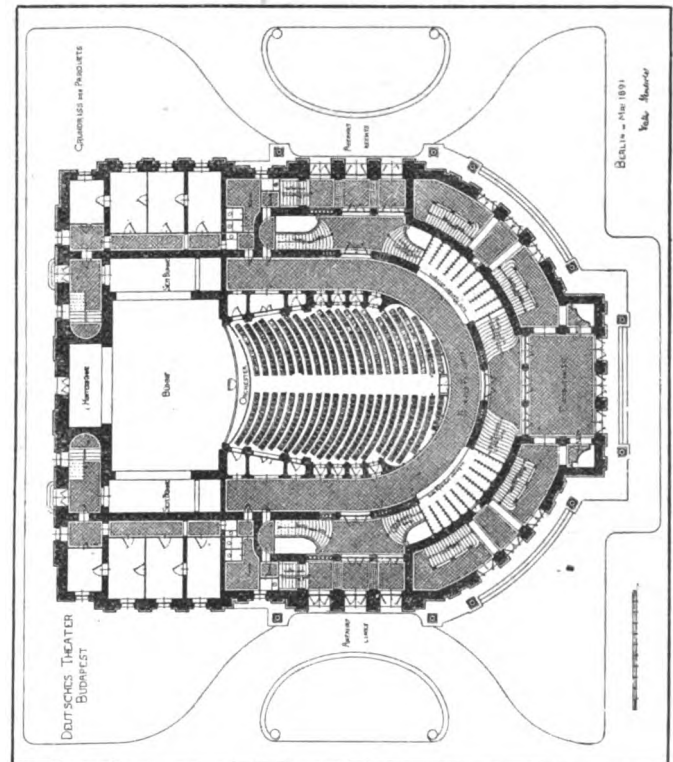
putting their jets of water on the prompter's box, that they drenched several of the flying audience. By this time the theatre was empty; and it is worthy of special note, that although there was a distinct

and serious panic, there was no loss of life, no casualty of any kind, and, after a delay of three-quarters of an hour, the audience again entered and the performance proceeded as if nothing had occurred. This theatre is well designed, well constructed, well



managed and well guarded; its corridors, passages and staircases are so arranged as not to confuse an audience, or become filled with smoke at an early stage, and its exits are properly placed and of ample capacity for allowing the escape of a full house without dangerous crushing. The lesson from this event is, that with proper arrangements a theatre can be made safe in the event of either fire or panic or both combined. It is most satisfactory to be able to write in this strain and a hope may be expressed that there may be no relaxation in the present excellent arrangements of the Buda-Pesth Opera-house."

It is well known that in the summer of 1894, several English fire-experts visited many Continental cities with the intention of seeing the methods adopted abroad. Among other objects of their visit was the desire to see what was done for the protection of public buildings including theatres, from fire, and one of their number, Captain Arthur Shean, made some special notes as to the result of their investigations upon this important subject. As he justly remarks, "Theatres by their very build, inflammable contents and great danger to human life, have presented a problem to firemen and architects," and that there have been considerable advances made of late years in fire-extinguishing appliances. I do not wish to



follow Captain Shean in the whole of his description of the systems of fire-extinction employed in the theatres of the various towns of Europe he visited, but to confine my references to his notes in the city of which I am speaking in the present article. In Buda-Pesth he noticed that the firemen at the conclusion of the performance

<sup>1</sup> Continued from No. 1036, page 52.

were not, as in many towns, employed in calling cabs, but two minutes after the fall of the curtain were to be seen laying out every line of hose with branches attached, in fact, the whole working gear, ready for immediate use. As statistics show that many fires originate just after the performance, — no doubt through relaxation of the fire-watch — this precaution is indeed a wise one.

Speaking further of the protection of theatres, he remarks that they certainly were not prepared for such a display as they witnessed at the Buda-Pesth Opera-house. "Twice every year the extinguishing plant must be practically tested. In consequence, all scenery and furniture must be removed. The flooring of the stage is opened up, and means found to carry off the volume of water. The stage is filled with sprinklers, namely, iron cups, fitted at intervals to water-pipes carried across the ceiling. A small rod or pin holds the cup together, which is water-tight. The pin is held with a small metal ring which melts at a given degree of heat. Automatically, as the ring melts and the pin gives way, the cup falls in half, releasing water at high pressure, which strikes the upturned and dropped half of the cup, and is thereby spread around a considerable area. The practical display we witnessed quite convinced us that no fire could live under such a deluge, supplemented, as it was, in the course of a few seconds by the hydrants. Continued for any length of time, the building would stand more chance of being washed away than burned."

It is upon the site of the ruins of the old German Theatre, destroyed by fire, that Mr. Hentschel will build the house which is the subject of the present article.

It will be seen from the plan that this is a very large theatre. The building has a semi-circular frontage and the line of this frontage is governed by the back wall of the auditorium, and all the vestibules, corridors and staircases are planned with walls on the same circular lines; there are, therefore, no useless spaces left and no awkward corners. This curved treatment of the auditorium, approaches and foyers is one which also appears to a great extent in the Dresden Opera-house, the Vienna Hofburg Theater and the Odessa Theatre and it is undoubtedly a treatment which is most effective, as well as economical. It affords ample room in promenades for visitors who are desirous of stretching their legs between the acts, and there is not the monotony in these curved promenades and corridors that there is in a long straight foyer.

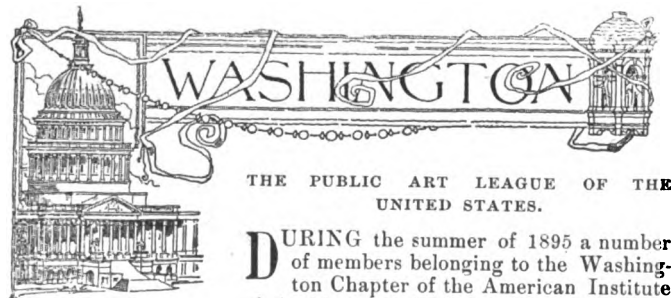
The German Theatre, Buda-Pesth, has three main entrances, one in the front and one on either side, in addition to minor entrances to the galleries, etc. Large vestibules lead from these entrances to the staircases of the various tiers, of which there are four in number. Another feature of the building is the very ample cloak-room space, given on the area floor, level with the hat-and-coat stands in recesses leading out to the corridor.

In the section it will be seen that there is a large canopy or hood over the stage-opening which forms a portion of the proscenium decoration. This feature has been copied from the Ronacher Variety Theatre, at Vienna, which was built some time back by Messrs. Felner & Hellmer. When these architects used this treatment they had a distinct object in view, namely, the bringing forward of the stage into the auditorium, because there was very little depth in the stage itself. The Ronacher Theatre was built on the site of an old theatre which was burned down, but the whole of the theatre was not given up to the new theatre, a large portion of the old stage being used for an assembly-room, and thus the site for the new house was diminished, and the size of the new stage curtailed. So, as by this means the depth of the variety-stage was so reduced, Messrs. Felner & Hellmer had to resort to the device which Mr. Hentschel has copied in the Buda-Pesth Theatre, but without the excuse which created the original.

It is, perhaps, to be regretted in so magnificent a building that such a copy has been made when the same reasons do not exist.

E. A. E. WOODROW.

(To be continued.)



Washington held a meeting to consider the advisability of forming a Public Art League.

The object of the proposed League was to obtain the enactment of a law appointing a commission of experts to decide upon the merits of works of art which may in any way be acquired by the United States Government, such as monuments, statuary, mural decorations, paintings and the designs for buildings, landscape work, bonds, notes, stamps, seals or coins.

The first meeting decided that such an organization might lead to good results. After repeated meetings a constitution was adopted,

and a list of officers selected who were invited to take charge of the League, the permanent organization being made conditional upon a majority of the officers accepting the positions which were tendered them.

The required majority have accepted and the organization of the Public Art League of the United States is an accomplished fact.

There is an evident desire on the part of the community for the Government to have the best art work that can be obtained. That there is need of improvement in the methods of selecting such work is felt, we might say known, by professional artists and the cultivated community generally. How to increase this feeling, crystallize it and bring it to bear upon Congress so as to get practical legislation was the question to be solved. The Public Art League is an effort from which we expect rich results in this direction. All who desire the advancement of the people in culture and taste will have, through this organization, an opportunity given them to exercise their influence in accomplishing the desired legislation.

New York, Boston, Baltimore, Philadelphia, Chicago and possibly other cities, at the present time have municipal Art Commissions who have more or less local influence in the selection of art adornments for streets and parks. The Public Art League, without doubt, will have the assistance of all such local associations as well as the co-operation of art societies throughout the country. It is principally through such associations that the large membership and influence which is necessary must be spread over the country.

We feel confident that the architectural and art magazines with the better class of periodicals will assist the League in its efforts to obtain legislation in the broad field, which is the object of the organization.

The present methods the Government has of selecting works of art and the results may be briefly summarized as follows:

The designs for Government buildings depend upon the department under which they are erected. The Treasury Department, through the Supervising Architect and his assistants, has the larger portion, including Post-offices, Government Court-houses, Custom-houses and Marine Hospitals. These buildings have been proved by careful investigation and comparison to be inferior in design and construction, and to have cost at least fifty per cent more than private work of a similar character. The buildings erected by the War Department are in charge of the Quartermaster-General's office, with a carpenter in charge. It is unnecessary to say that little that is artistic is the outcome from such an arrangement. Other Government buildings are given directly to members of the Engineer Corps, or to architects selected because of friendship or supposed fitness. A limited number have been given out to public competition. That some of the selections made under the above methods have been happy ones was due more to good luck than good judgment.

Monuments, statuary and paintings are usually selected by Congressional, Grand Army or other committees, the members of which have had neither the education nor the training to make them suitable judges. Locations in Government parks or buildings are assigned to these pictures and statues, monopolizing sites which are worthy of a better fate.

All are familiar with the effort made by the American Institute of Architects to improve the methods of obtaining designs for the buildings which are erected under the Supervising Architect's office. The McKaig Bill was passed, but it was not mandatory, and the Secretary of the Treasury has not put it into operation.

St. Gaudens and others were members of a jury to select the design for some of the new issues of coin. In this case, likewise, the jury's report was received but not adopted, because some of the Government engravers thought they could do better. The result is constantly before us in the form of our silver dollar.

The St. Gaudens World's Fair medal was rejected after the model and probably even the dies were made, because of the prudery of a Congressional Committee.

Over the recent competition for the Sherman Monument there is disagreement between the art and military committees.

The League should endeavor to have their laws, if passed, made mandatory. If once passed, it would be difficult to have them annulled, as it would require the favorable action of both Houses and the signature of the President to accomplish the purpose. The laws which the League will propose to effect the desired results will, of course, depend upon the officers of that body.

In January, 1895, in an article on "Public Architecture" published in *Public Opinion*, I made the following suggestion:

"The beauty of Government buildings is so easily enhanced, perfected or marred by the landscape work and the character and grouping of works of art which surround them, that all these branches should be under the control of one department. We should have a Commission of Fine Art, not to design, but to select and represent the Government in all matters of art. This department should be composed of architects and artists, nominated at stated periods by the art associations of the country, and in no way connected with politics. No plan should be selected for buildings or grounds, no piece of sculpture, painting or other work of art should be bought or received as a gift until approved of by this department. The selection of designs for coins, stamps, notes and bonds might be with advantage left to the same experts.

"Only in this way can we expect Government architecture to attain its highest beauty and do the greatest good as an educator.

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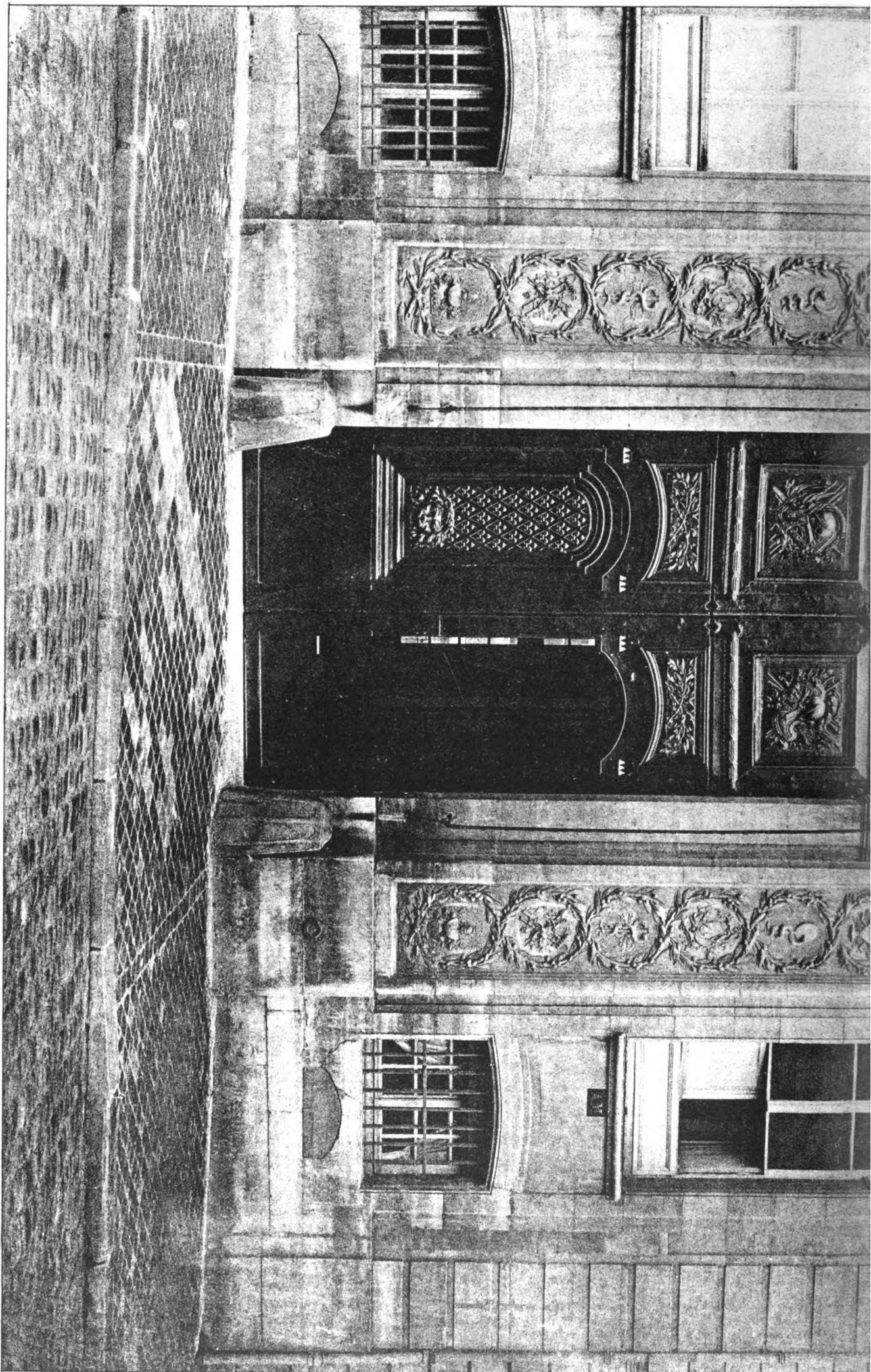
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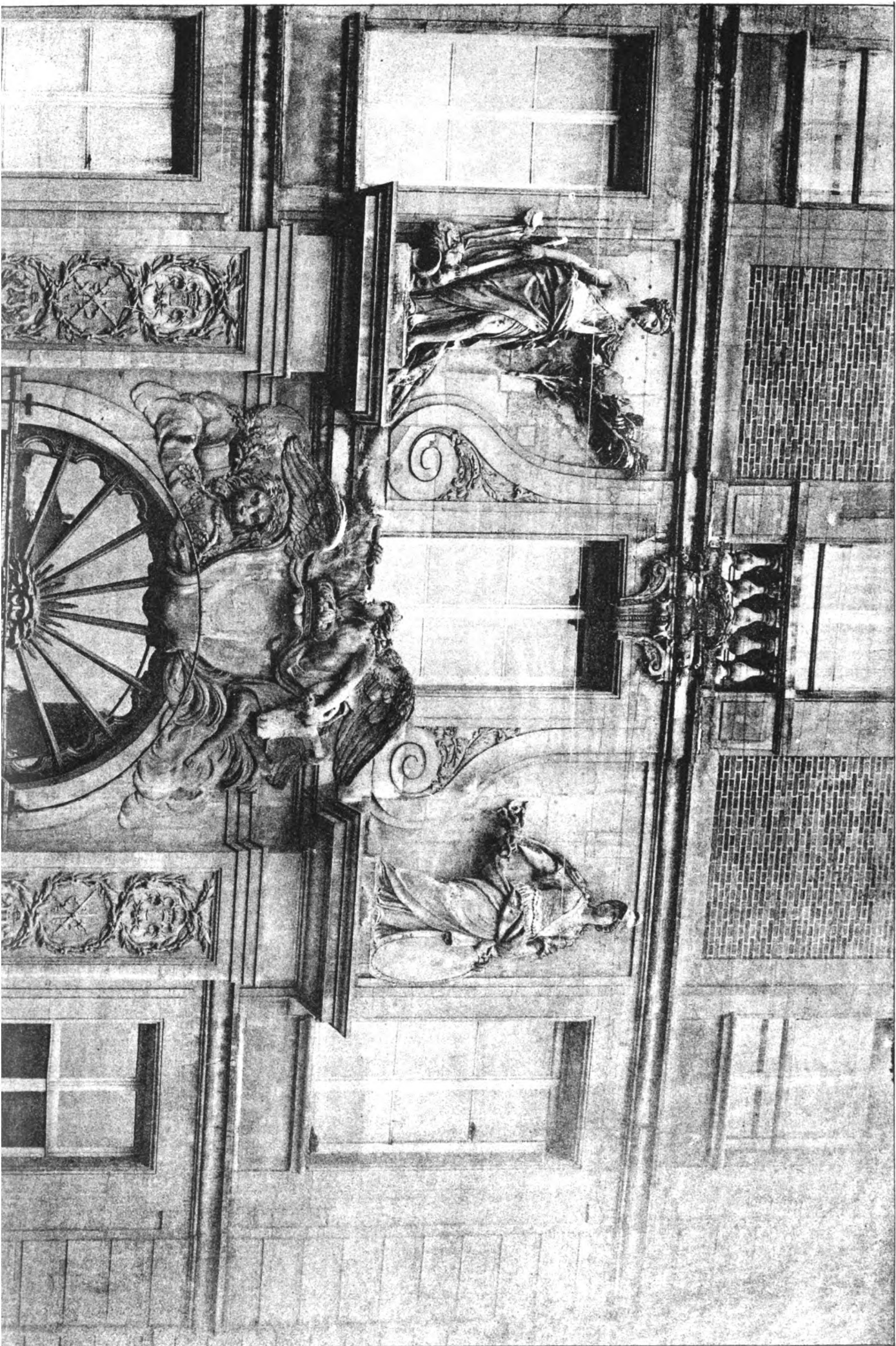
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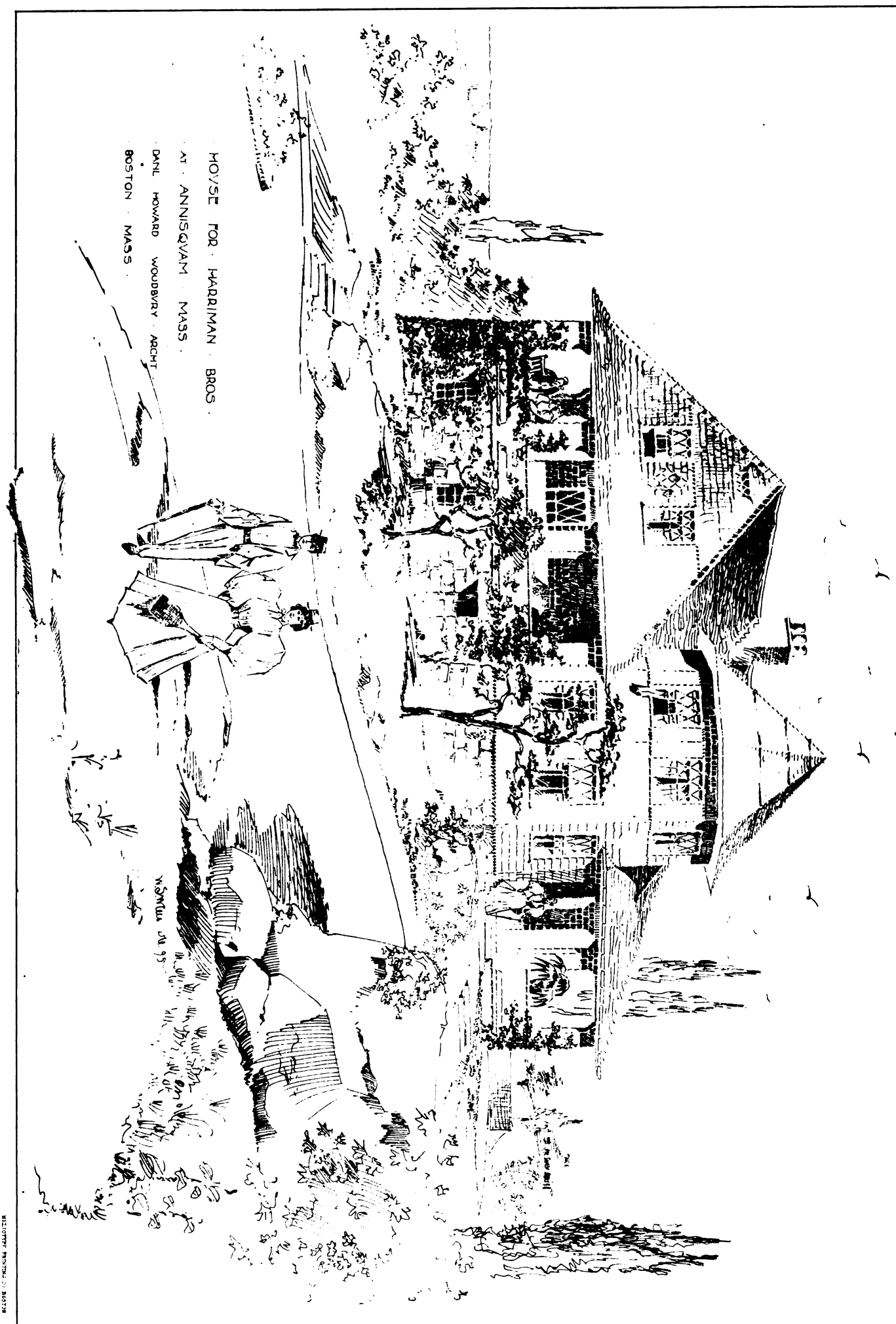
ILLUSTRATION BY J. B. B. B.











HOUSE FOR HARRIMAN BROS.  
AT ANNISQUAM MASS.  
DANL. HOWARD WOODBURY ARCHT.  
BOSTON MASS.



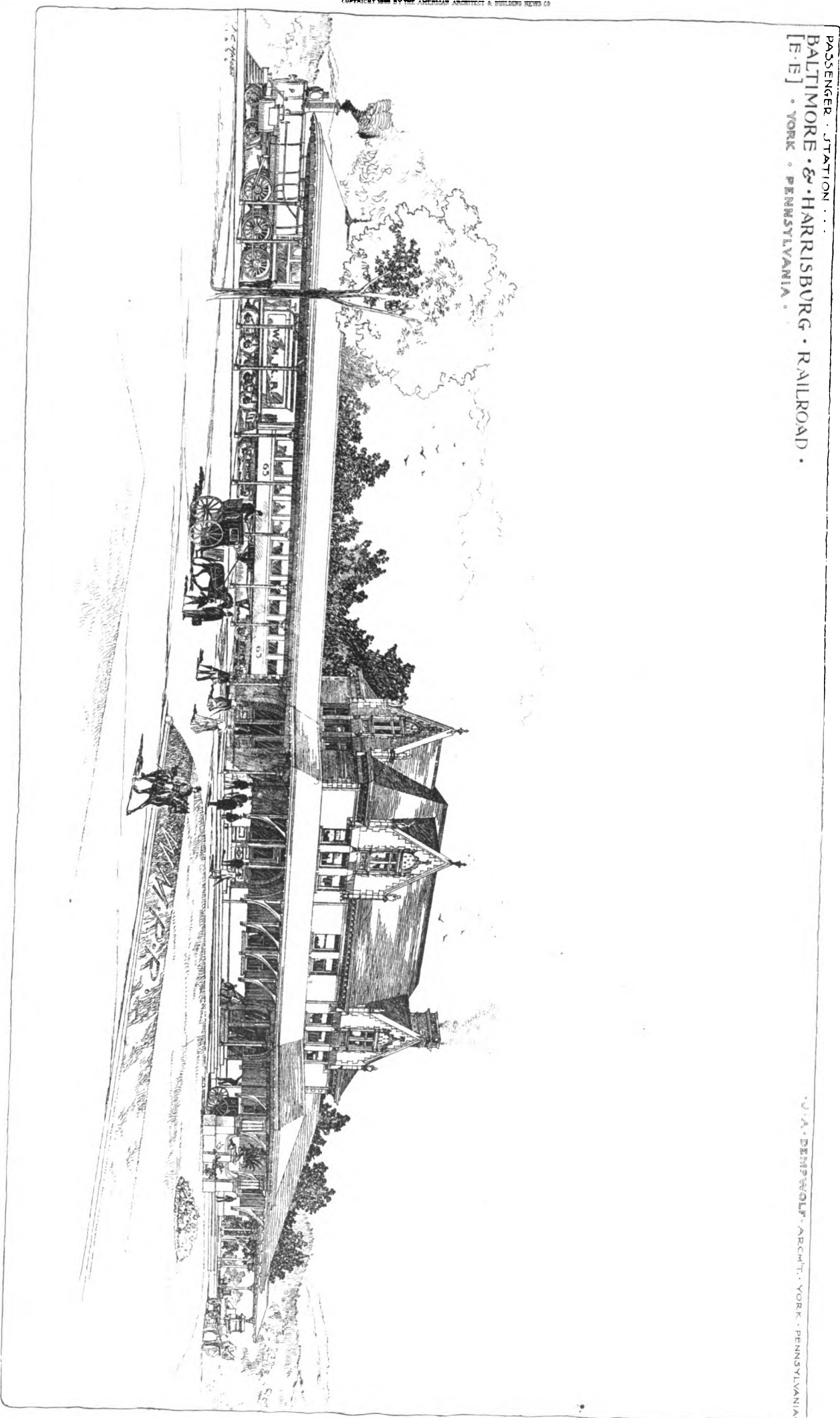


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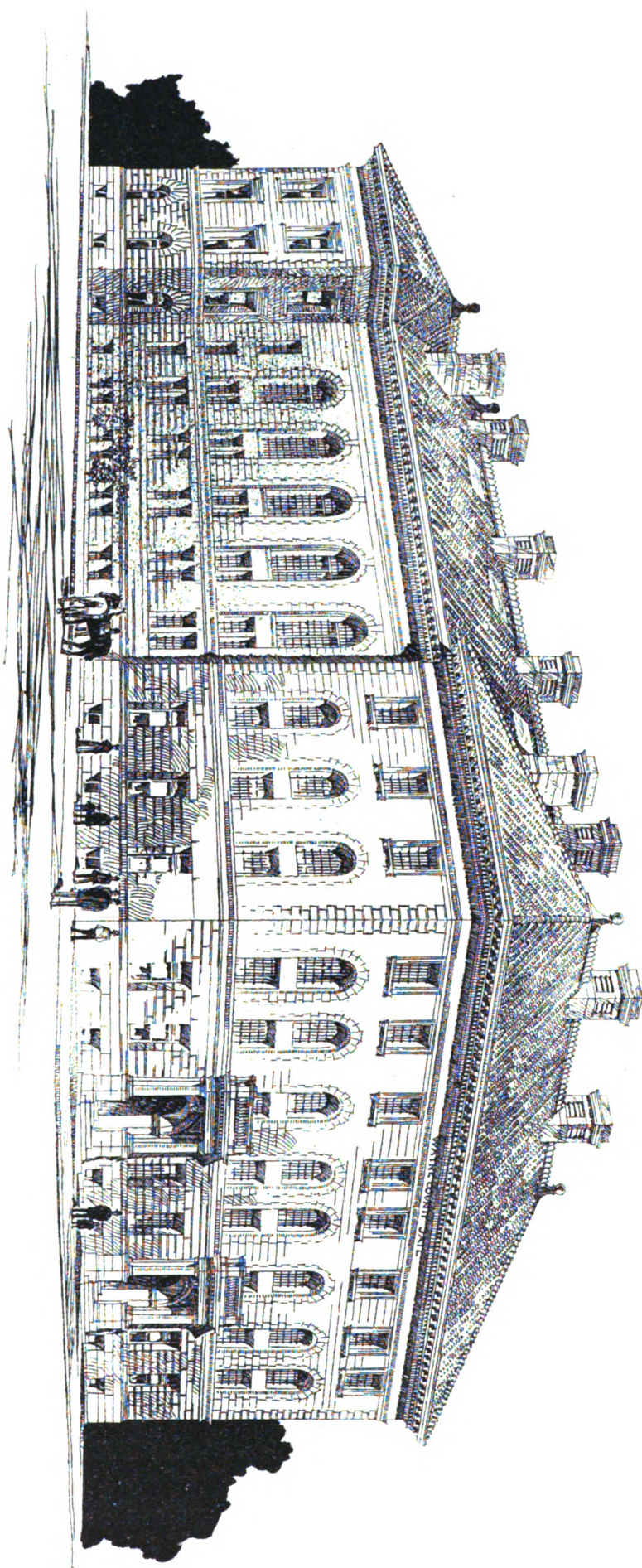
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WAYNE COUNTY JAIL AND SHERIFF'S RESIDENCE  
DETROIT MICHIGAN

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ARCHITECTS



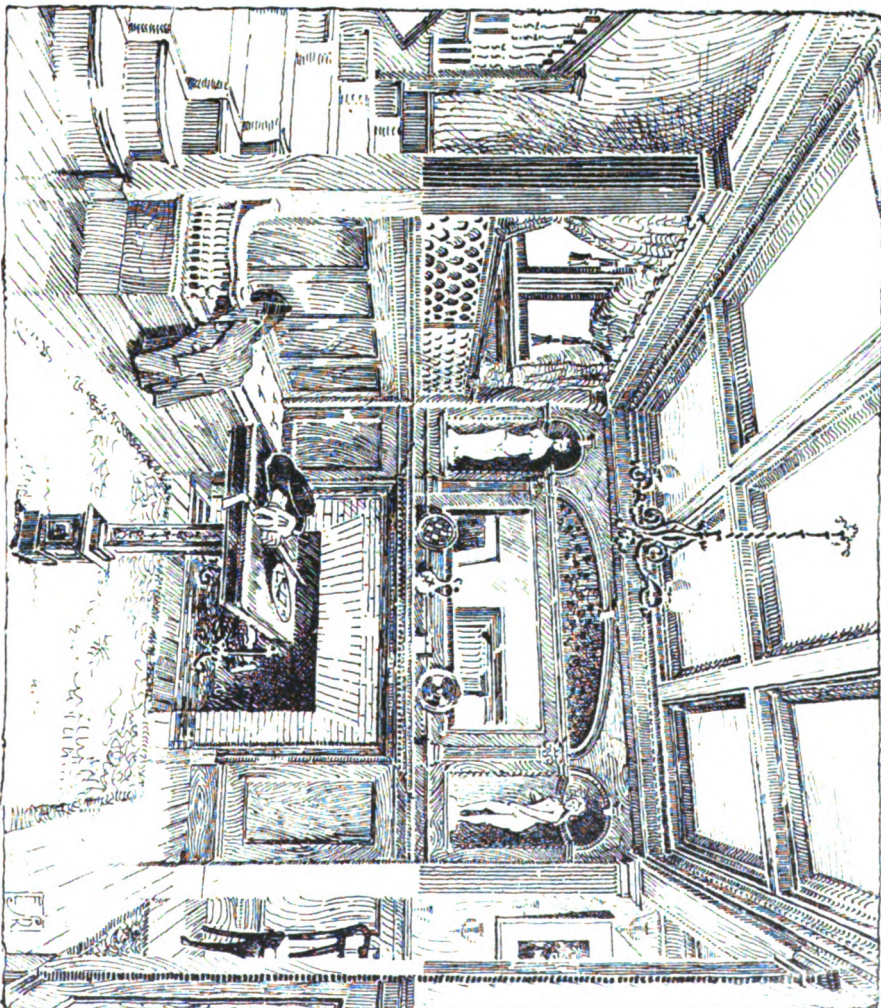




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HOUSE AT JAMAICA PLAIN FOR MR. M. K. GREEN -  
 RANDOLPH TAYLOR - KENDALL & STEVENS - ARCHITECTS -



DESIGNED BY RANDOLPH TAYLOR





A beautiful monument or building constantly before the people cannot fail to cultivate the eye and mind, and lead unconsciously to the use of objects of art in daily surroundings. It is as difficult to estimate the value of beauty as a means of refinement as it is to estimate the value of refinement and culture in improving the moral tone of the masses.

"The good effect of the beautiful is a fact, and the surest method of diffusing this refining element is by beautiful Government works of art."

My idea of such a Commission is a board composed of architects, mural decorators, painters, sculptors and a landscape artist, who shall be selected at stated periods, only a part retiring at one time, from nominations made by the National organizations in architecture, painting and sculpture. The Commission should have full power to regulate its own methods of selecting designs, whether by competition or individual selection, or simply by passing judgment upon work done by individuals in the Government employment.

They should have a permanent secretary located in Washington, who should devote his whole time to seeing the Commissioners' opinions properly executed.

In this way the board should consist of some of the most prominent men in each profession of art. To be selected by these associations would be an honor no man could disregard, if he deserved the position. And those selected would and should accept the position even at a personal sacrifice. This sacrifice would probably be necessary, for the Government would not do more than pay the expenses and a *per diem* that would be insignificant to the men who would be selected on such a commission.

One of the most prominent object-lessons the world has seen in modern times was the effect produced by harmonious grouping of landscape, buildings, statuary and decorative art at the World's Exposition in Chicago. This unity of purpose, harmony of one part with the other and the whole, and the grand effect of the completed work was only obtained by the action of an expert board such as the League contemplates in connection with Government art. This one example of what has been done in this country with temporary work is an ample argument to prove what may be accomplished in a permanent way under efficient management.

One of the first objects to be worked for by those who are interested in the subject is to increase the membership of the League. The larger the membership the wider will be its influence, and the fee of one dollar a year, while insignificant to the individual, will, with a large membership, give the Board of Directors a fund to print and distribute literature on the subject, pay the expenses of committees who have the matter before Congress in charge, and possibly employ an attorney who is competent to look after the details of securing legislation.

## THE USE OF THE GROTESQUE IN SACRED ARCHITECTURE.

### A "SERMON IN STONES."

[It is not so much the fashion in this country as it is in England for clergymen to take an intelligent interest in architecture and archaeology. But the Rev. Frank Sewall, of Washington, D. C., by his intelligently directed efforts to bring about the establishment of a proper National Fine-Arts Commission, has proved himself to be entitled to a respectful hearing from architects, who therefore may not find the following sermon as much out of place in an architectural journal as it might at the first thought seem to be. — Eds.]

Ira hominis constabitur Tibi: cum residue irarum ocinges Te. Ps. LXXVI: 10.  
Surely the wrath of man shall praise Thee: The remainder of wrath shalt Thou restrain (gird upon Thee, R. V.). Ps. 76: 10.

THE poet has described the true love of nature as being able to read "sermons in stones and good in every thing."

If the reverent mind shall thus be able to see the thoughts of God as they are written in nature, should it not be all the more reasonable to seek such a meaning in art, which has for its highest mission the interpretation of nature, or the mediation between nature and the mind of man?

Especially has it been true of the art of sacred architecture that — from the building of the ark, the tabernacle and the temple, down to the construction of Christian churches — a sacred meaning has entered into every feature of the building, and both within and without, the temple of divine worship has been intended to be replete with its "sermons in stones."

I was asked during the summer by a church-member what reason could justify the introduction, by the architect and stone-carver, of the various hideous and monstrous forms which are made to serve as gargoyles or water-spouts at the extremities of the roof-lines and other water-sheds of the church. I have thought that the answer I gave him may be of use to others in whose minds the same question will not unlikely arise. But the principle which underlies this somewhat mysterious feature of sacred architecture is one of such universal and deep religious import that I do not hesitate to make use of this incident as introductory to, and illustrative of, the real theme of my sermon: *Divine Government over the Evil, or the Laws of Divine Permission as a Part of the Laws of Divine Providence.*

"Surely the wrath of man shall praise Thee: and the remainder

of wrath shalt Thou restrain." The Lord makes even the evil to be subservient to His aims of good.

The various grotesque and ugly forms referred to are generally of mythical animals, like the dragon or the griffon, but often of other brute creatures and sometimes even of distorted human figures. They invariably express the grosser and lower affections of the human mind — and generally the affections of evil and the emotions of anger. Curious to know what the workmen themselves, who now put these figures into the sacred building of churches, understand their introduction to mean, I asked the stone-carver who is showing so much artistic invention and skill in the beautiful work he is now doing on the building of our church, what he understood to be the meaning of these grotesque and hideous forms. His answer showed that he knew the real principle involved in what he was doing, and that practically these carved figures of evil stand for "the devils cast out."

What he said was that, "We put the holy and beautiful things inside the church, and the base and hideous as far out as we can get them. You see them, therefore, on the corners and extremities only." This, I say, was his expression of the principles involved in the "devils cast out of the man and entering into the herd of swine." It is the evil thrust out of the holy sanctuary of the inner man and his worship and compelled to take its place outside, *where it can be seen and judged!* I do not deny that there have been gross perversions of this idea, notably in the monstrosities concealed in the so-called misereres, or canons' stalls in some mediæval churches; but these cases only show that artists then, as now, sometimes refused to be restrained by any law: they do not invalidate the law or principle itself as above defined.

But there is a deeper principle than this even, involved in the same idea — that of the use that is made of these very forms — being the same use that the Lord makes of man's evil and lower nature. The subordination of evil under good, or the turning of evil to good uses by the Divine omnipotence and wisdom finds its expression in this feature of architectural art as it does in the words of the Psalmist. "Surely the wrath of man shall praise Thee: the remainder of wrath shalt Thou restrain." In other words, the use of grotesque and hideous gargoyles in architecture illustrates the universal philosophic and religious truth of the *uses of evil!*

I have said that some of these forms express violent emotions of anger while some are simply grotesque and provocative of laughter. A recent issue of one of the illustrated magazines had a very instructive article on the Cathedral of Notre-Dame in Paris, with pictures showing many of these very ludicrous forms.

Now ridicule has its moral uses; some evils only need to be brought to the surface to be actually seen in their effect, and to be laughed at, to be put away. Many a man and woman can stand anything better than being laughed at, and caricature in our popular press is one of the mightiest of all weapons used in the enforcement of public sentiment.

The distinguishing characteristics of these architectural adornments is, however, the kind of use they are put to, which is always a servile one. They are compelled to be carriers of burdens, or spouters and spewers of waste-water. These are not the dignified uses into which the human and the angelic mind can enter. The same principle is exemplified in other forms of sculptural art. In a beautiful fountain wherein are grouped in bronze or marble the forms of men or women expressing some lofty idea or sentiment, it would be offensive to see these forms made use of, either in supporting columns or as spouting forth the water of the fountain. For the support of heavy entablatures we see often used the Atlantes or Caryatides, muscular and often beautiful forms of men or women, whose purpose, however, is simply that of sustaining strength, while the water finds its issue from the mouths of Tritons or some order of creatures subordinate to man.

And so in the building of the church, when it came to the decorating of the water-spouts and the brackets, it was thought undignified to introduce the nobler and more beautiful types of the human form. The saints and angels may stand with uplifted gaze upon pinnacles or in niches, as if engaged in the very act of worship itself: the lower creatures — even the baser, merely animal forms of man — these also can worship in their way; they can serve God on the plain of their own uses: they also serve

"Who only stand and wait."

They can worship in being the bearers of heavy burdens and the waste-ways, the gutters and the sewers of the vast human economy — "Even the wrath of man shall praise Thee: and the remainder of wrath shalt Thou restrain."

All animals are correspondents of human affections, good or evil, and are, therefore, expressive of them. All the animals in Paradise, we read, were brought before Adam to be named because he only as man, in whom all affections reside, could "know their names" that we could understand the human qualities which are written large in the whole animal kingdom. And so all these animal figures, made use of in art and legend, have their human meaning and speak to us in a language far more eloquent than any speech of monkeys that Mr. Garner will ever learn. I say the animal forms in art and legend, for even the fabulous creatures of mythology, such as winged lions, dragons and unicorns are all made use of in holy Scripture as types of human affection and even as the expression, in their places, of man's adoration and worship.

"Thou hast heard me from the horns of the unicorns," sings the Psalmist (Ps. 22), and in another place, in that great Psalm wherein nature in all her heights and depths is called upon to praise the Lord, even the dragons are not forgotten.

"Praise the Lord from the earth, ye dragons and all deeps: . . . beasts and all cattle: creeping things and flying fowl." The mythical animals owe their very existence in literature to the law of Correspondence, under which law man has sought to embody in animal forms some peculiar phase of human affection or thought. In the sacred geography of Scripture, not only the lower animals are made use of as types of divine service and worship, but even the lands themselves that lie about the holy domain of God's people; sings the Psalmist: "Moab is my wash-pot: over Edom will I cast out my shoe: over Philistia will I triumph!"

Now the lesson of these lower animal forms in sacred architecture is that of the subordination, by the Divine Government, of all things to use, even the things of evil. Within the Holy City are the pure and beautiful forms of life; without are the dogs, the profane, the abominations, but they all have their place under the Divine Government and their introduction into the stones of the church building, as into the letter of holy Scripture, only lends a powerful illustration of the truth of the universality of the Kingdom of God.

"From whose all-pervading eye  
Naught escapes without, within."

Not only is no evil concealed from God, it is in His sight all brought to the light, but He can turn the evil of man to man's good or to the "restraining," at least, from further evil; and so He can make even the wrath of man to praise Him, while the remainder of wrath He can keep within bounds. In other words, the evil that cannot in some way be turned to good, God never permits. All evils occur under the laws of the Divine Permission which are a part of the law of Divine Providence.

I have spoken of this as a universal principle in philosophy, in morals and in religion. In philosophy it might be designated as the law of Opposites — or of that distinction by negation which is necessary to the existence of things. Good, in order to have the quality of good, must be distinguished from evil, its opposite: the assertion of good as a quality is the assertion of the idea of evil as a possibility as its opposite. In morals this permission of evil is involved in the freedom of man in which, while under the government of God, he may still freely transgress the laws of God; whereas, without this freedom to transgress there could be no voluntary choice of good on man's part and, therefore, no such thing as virtue.

How large a place this same law of the permission of evil assumes in the doctrine of evolution I need here only suggest. It takes the form of what is called the "survival of the fittest," which means in science, the survival of the strong by the destruction of the weak. Destructive wars and all the evil passions they call into play are made use of by the Divine Providence in advancing mankind, just as destructive storms and pestilences are permitted in nature. These are all forms of evil made to subserve some greater ultimate good. But this is not the only survival of the fittest that the true law of evolution exhibits. It is according to the law of the "Sermon on the Mount," that the "meek shall inherit this earth" and that the "merciful are blessed, for they shall obtain mercy." In other words, the laws of violence and force and strife are those that under the laws of Divine Permission control the inanimate kingdoms of nature and of man considered as an animal, and as "praising the Lord from the earth" and "by his wrath" with the dragons and deeps and other creeping things; while the laws of brotherly love and compassion, and mercy and peace are those that prevail where man has started on his truly human, that is, his angelic career, or his development from a creature of earth into the citizen of the Holy City — the New Jerusalem. The two law-systems are not conflicting; the one, under Divine Governance, leads into the other. Just as all laws of discipline give way when they have done their work to the liberty of the love of what is good and right for their own sake.

And this is the sermon in stone I would have you read when you see dragons and shapes of violence introduced into the structure of the temple — namely, the truth "that the Lord governs the hells!" Tell me, is there any truth, any sermon that may be preached, more comforting than that! No church is doing her mission in the world that casts out the evil and sinful as beneath her regard: she is to claim all in the name of the God that governs all. Even though she walk through the valley of Death, she need not fear, for God is in the midst of her: she shall not be moved.

"He prayeth well who loveth well  
Both man and bird and beast."

"He prayeth best who loveth best  
All things, both great and small,  
For the dear God who loveth us  
He made and loveth all."

Amen.

GREAT HAMMERS. — Below I give a list of the great hammers in European ironworks, their weight and their date of manufacture. Terni works, Italy, fifty-ton hammer, made in 1873; Alexandrovski, Russia, one of the same weight, 1874; Creusot, France, eighty-ton hammer, made in 1877; Cockerill works, Belgium, one of one hundred tons, made in 1886; one at the Krupp gunworks, Essen, Germany, also made in 1886, weighs one hundred and fifty tons and is the heaviest in the world. — *St. Louis Republic*.

## SPANISH ART AT THE NEW GALLERY. — I.

WITH the opening year we have at the New Gallery one of the National series of exhibitions which are so important and interesting, as affording valuable opportunities of studying not only the position held by the various European countries in regard to art, but as throwing side-lights on their histories by the numerous portraits of the men who helped to make those histories.

The two previous exhibitions held in 1894 and 1895 illustrated very fully art in North Italy and Venice, from Cimabue upwards and onwards till its decadence; and this year we are invited to behold a splendid display of objects relating to Spanish art.

The committee, with the Duke of Wellington as President, is to be congratulated on the superb and comprehensive collection which the liberality of the owners has enabled it to bring together as well as on the arrangement of it, notably that of the central hall, which might almost be the entrance-hall of a palace, so rich are the hangings, the lamps and the armor with which it is furnished. The Exhibition embraces many old pictures and some modern ones, drawings, engravings, embroideries, lace, potteries and glass, armor and arms, and a considerable number of ecclesiastical and religious objects, besides several valuable manuscripts. A vast proportion of the pictures, though illustrative of one of the arts of peace, owe their expatriation to the fortune of war. From the advent of the Moor into Spain to the exit of the Duke of Wellington, the work of the preceding race or generation has been destroyed, mutilated or carried off by the conqueror; and what remains was either safely concealed or considered not worth the trouble of taking away. "It was part of the recognized duty of the French army to swell the catalogue of the Louvre, while picture-dealers armed with British gold accompanied our troops, though they usually left behind them more than they took away." The most barefaced robber was probably Marshal Soult. It is told of him that when showing his gallery in Paris to an English colonel one day, he stopped opposite a fine Murillo and said, "I very much value that, as it saved the lives of two estimable persons." An aide-de-camp whispered, "He threatened to have both of them shot on the spot unless they gave up the picture!"

And the storehouse is still unexhausted: as a writer of to-day says, "The modern Spaniard, unlike the modern Italian, does not despise the past and its works, he simply does not care; and if a foreigner wants the old things he might as well have them — at a large price." Only a year ago this same writer was offered the altar cross from a large church in an important Spanish city by the person supposed to be its custodian.

The walls of the New Gallery being covered with Spanish paintings, the *coup d'oeil* is naturally not such as was presented at the Venetian Exhibition for example, but we fear the Venetian artists would have been given but a short shrift had the Holy Office been dominant for even a brief period on the shores of the Lagoons. The Inquisition formed so important a factor in the domestic life of Spain, as well as in all pertaining to the fine arts, that in justice to our subject some reference must be made to it, since its influence largely contributed to the imprinting on the countenance that ascetic and sombre expression that almost oppresses the visitor to a gallery of purely Spanish portraits. It watched over thought, and the means by which thought expressed itself — speech, the press and the pencil, and did this assiduously. Few probably are aware that Pacheco — for a time the teacher, but better known as the father-in-law of Velasquez — was in 1618, commissioned by the Holy Office to take particular care to visit and inspect the paintings of sacred subjects standing in shops and public places, and if he found anything objectionable in them he was to take the pictures before the Inquisitors who would deal with them — and, of course, the unfortunate artists — as they deemed necessary. What tremendous power to be entrusted to one man, and he was a brother of a familiar of the Holy Office!

There was no need of "Trilbys" in Spain, as the study of "the altogether" from life was strictly forbidden by Pacheco, who said that "if they wished to study the female form, they could avail themselves of good pictures, etc., and the excellent designs of Albert Dürer, and so choose what was most graceful and best composed without running into danger." As regards pictures of the Virgin, the most rigid rules were laid down: Pacheco says, "What can be more foreign to the respect we owe to the purity of Our Lady the Virgin than to paint her sitting down, with one knee placed over the other, and often with her sacred feet uncovered and naked? (Let thanks be given to the Holy Inquisition which commands that this liberty be corrected.)" Another writer speaks of the impropriety of depicting her unshod, since they know that she wore shoes from the much-venerated relic of one of them from her divine feet in the Cathedral of Burgos!

Verily, it was a serious matter to undertake a religious subject under such circumstances — and the principal demand was for these — therefore, small wonder is it that many artists gave themselves up to prayerful meditation and confession ere venturing on it.

But to revert to the immediate subject of this notice: There are some two hundred paintings by old masters with several examples of those of our own century, about half of the former being attributed to Velasquez and Murillo, and, as usual in these exhibitions, several masterpieces known to be in this country are not among them. The endeavor to hang together, so far as possible, the pictures of each



owner prevents us from studying a master's works collectively, since they are scattered through all the rooms.

In "No. 1" we have two little panels, 17½" x 6", shutters of a triptych, attributed to Antonio del Rincon — the father of Spanish painting and earliest of the truly national painters; and in these groups of King and Queen devoutly kneeling (their patron saints standing behind them) is easily traced the passing influence of the Flemish masters. The panels are additionally interesting, as giving authentic portraits of Ferdinand and Isabella, that of the latter showing both dignity and intellectual beauty; indeed, it was from her that her descendants inherited their love of the fine arts. Antonio stood so high in his sovereign's favor as to be honored with the Order of St. Jago. It is to the credit of the Austrian dynasty that they relaxed in favor of the fine arts the rigid ceremonial of Spanish etiquette. Charles V made a friend of Titian; the gloomy Philip II treated Sanchez Coello with the greatest distinction, gave him a studio in the palace, often visited him there, and caused him to remain seated while at work in his presence, Philip leaning on his shoulder to watch the work; he even addressed the painter when writing to him as "My beloved son." This King showed such favor also to Sir Antonio More as to excite the jealousy of the courtiers, who trumped up a false charge of heresy against him, which, but for timely warning, would have lodged him in the Inquisition's cells.

Among the few examples of Morales are a "Pieta" on a panel, a painful subject well treated — the wood of the cross behind Mary's head standing out well from behind the dark background — from the

"Speech Heaven denied to him whose dumbness threw  
A deeper sense and charm o'er all he drew;  
And, mute himself, his breathing pencil lent  
Canvas a voice, than mine more eloquent."

Of portraiture in the time of Philip II there are several fine examples from the masterly pencil of Sanchez Coello, pupil of Sir Antonio More, and painter in ordinary to the King. Sir J. Stirling-Maxwell lends the portrait of Philip himself, life-size, three-quarter length; he wears a small lace ruff above his suit of armor which is richly inlaid with gold, in the right hand he holds a baton, resting the other on his sword, while from his neck hangs the chain and order of the Golden Fleece (which is a small gold sheep). His complexion and hair are fair, countenance gloomy and morose. The other portraits by Coello are full length, and undoubtedly the finest and most charming is that of Isabella of Valois, third wife of Philip II. Her pleasing face deserves mention as being the *only* one among two hundred pictures that wears the ghost of a smile. Her elaborate dress is purple, she wears rich jewels and pearls on neck and wrists, and on her auburn hair, which is frizzed, there is a wreath of roses; the pose of her hand, which holds a fan, is very graceful and lifelike. We must not forget the lace cuffs and large lace ruff so familiar in Zuccherro's portraits of Queen Elizabeth, the style of which this magnificent portrait strongly resembles. The canvas is 78" x 36" and is lent by A. Stirling, Esq. Captain Holford lends a portrait of the daughter of Philip and Isabella, Donna Eugenia, governess of the Netherlands, and afterwards wife of the



Stable for Mr. Charles Sooy Smith  
Green's Farms, Conn.  
Jardine Kent & Jardine Archts N.Y.C.

famous Standish collection, and "Christ Bearing the Cross," in which the face, though thin and worn, bears an idealized expression of heavenly resignation, not easily forgotten. This sublime expression of self-sacrifice is a characteristic of this painter, who on that account is called "The Divine." By Navarrete, "El Mudo," there are his own portrait from the Soult collection, a somewhat sad, but powerful and artistic face with very earnest eyes; and the portrait of Donna Maria Padillo: her black mantilla covers half her face, which is particularly fine.

Deprived by illness of hearing at the age of three, Navarrete never learned to speak, but when very young used to copy with charcoal everything that pleased him; so his father had him taught by a monk living near, by whose advice Navarrete went ultimately to Rome, where he is said to have studied in the house of Titian. On his return to Spain, Philip II was shown a picture by him, which so pleased him that he assigned "El Mudo" a pension, and employed him in the Escorial; but some of his works, like so many others of value, perished in a fire. When Philip, finding Titian's splendid "Last Supper" was too large for the place assigned, ordered the top to be cut off, so as to fit the wall, it was Navarrete who did all in his power by signs to beg the King not to do it, promising at the risk of his head to make a perfectly faithful copy — but in vain. This fine painter died in 1579. Lope de Vega, in a lament on the death of "El Mudo," has this epigram, which is translated as follows by Mr. Stirling, and given in his work on Spanish painters:

Archduke Albert of Austria. She has a somewhat heavy and sullen face, dark hair richly dressed, and wears festoons of pearls and the lace ruff. Another portrait of this princess by Pantoja de la Cruz, Coello's best pupil, is lent by the Duke of Westminster. There are also a few more fine portraits by Coello of unnamed personages.

Domenico Theotocopuli, known as "El Greco," was born of Greek parents in Venice and came to Spain to work at the Escorial; he is said to have been a pupil of Titian. A small canvas, "Christ chasing the Money-changers from the Temple," is an example of his early and Venetian manner, but the general character of his work is thoroughly Spanish. His portrait of the sculptor Pompeo Leoni is exceedingly good, as well as the bust of Philip II on which he is engaged. Another fine portrait is that of the artist's daughter — a half-length in white hood and ermine cape. Her lovely and refined face with its regular features is lit up by a pair of sparkling black eyes. Both these canvases are from the Louis Philippe collection and were exhibited in Manchester in 1857.

Ribera, "Lo Spagnoletto," is represented by several works, "A Philosopher," the bust of an old man holding a chart with diagrams in both hands — the long beard and wrinkled face are portrayed to a nicety — is vigorous and strongly lighted. "The Locksmith," from Dulwich College, depicts a man of great strength turning a key in a lock he holds in his hand, while looking towards the spectator. "Æsop" is another old man of vigor; every detail of this picture is

of interest. Ribera is an instance of natural genius rising above all obstacles. When at school he learned little, finally ran away, and made his way to Rome by begging, for he had no money. Here he was seen one day by a Cardinal who was attracted by the sight of a half-clad ragged boy sketching statues in a garden, while beside him was a heap of crusts given him by the passers-by. Struck by the sight, the Cardinal offered to take him home to his palace and have him taught, and there he remained for some time. Desiring more freedom in his studies, he left the palace and worked for a time in different studios, where he was called "The Little Spaniard." He ultimately returned to his native land.

We mention in passing, "The Assumption of the Virgin," by Cano, whose manner is soft, rich and pleasing. He may indeed be called the Spanish Correggio. In this picture there is a very natural look of surprise on Mary's face as she holds out her hands in astonishment at the glories around her. According to the legend, the bystanders, seeing the open tomb, ran to look at it and beheld the earth on which she had lain spring into lilies, and this scene forms the lower portion of the picture. The idea is essentially Byzantine and Gothic. Cano's own portrait, by himself, hangs in the Gallery and depicts a clever but narrow-minded man, as his history proves him to have been, especially where the Jews were concerned.

The few large canvases by Herrera relate to incidents in the life of St. Bonaventura. This extraordinary man must not pass unnoticed, as he was the first teacher of Velasquez, and his style—bold and even furious—had considerable influence in that of his illustrious pupil. His works show genius, and to that he certainly owed his escape from the consequences of a serious accusation of coining, brought against him through his love of engraving on brass. Taking refuge at a convent in Seville he painted a grand picture of his patron saint, which chanced to be seen by Philip IV, who said, "that one possessed of such talents could not have misused them." The painter was, therefore, allowed to return home.

Zurbaran, who undoubtedly stands in the first rank of Spanish painters, was the son of a small husbandman in Estremadura, who, observing his son's talent for painting, sent him to Seville to study, where he made the most of his opportunities. Zurbaran early formed a resolution not to paint even a piece of drapery without having it before him on a lay figure, and he thus acquired the habit of delineating men and things as he saw them. In his love of strong contrasts of light and shade he resembled Caravaggio. He was employed to paint three large pictures for a Carthusian monastery in Seville, where he had every opportunity of making those studies of white-robed monks in which he is unrivalled. There are four such monks exhibited, whose features bear the traces of their life-asceticism, "their white draperies chill the eye as their cold hopeless faces chill the heart." The "Magdalen," lent by Sir Clare Ford, is a full-length life-size figure in a long black robe and streaming auburn hair which covers her shoulders: she is contemplating a skull, her hand resting on an hour-glass, near which stands a lighted candle (much in need of snuffing) while a torn letter lies at her feet. Mr. Ford, the original owner, said of this picture, "A most characteristic specimen and truly Spanish." The Magdalen repents in sackcloth and ashes, and not with the nudities and allurements of Italian treatment, which tempt to a repetition of her sins. This fine canvas is 57 x 45 inches. His "Benjamin" is to all intents a Spanish shepherd standing in a large open country and looking at the spectator over his right shoulder. He wears a sort of Scotch plaid of striped material round his body, crossing the left shoulder, above his short blue coat with red sleeves which are tied with prim little yellow bows, as are also his short knee-breeches; by a long chain he holds a wolfish-looking dog. The Earl of Ancaster lends this vigorous picture, which is 77 x 40 inches. As a specimen of Zurbaran's faithfulness to nature, Palomino mentions a picture of an enraged dog from which chance observers used to run away. Called to court by Velasquez at the desire of Philip IV, he painted the "Labors of Hercules," ten works now in the Queen of Spain's Gallery. One day Philip saluted him as "Painter of the King and king of the painters." He died in Madrid in 1662.

[To be continued.]

#### THE PHILADELPHIA ARCHITECTURAL EXHIBITION.

**THE**

Philadelphia Architectural Exhibition, lately held at the Pennsylvania Academy of the Fine Arts, was indebted for its high standard to the liberal manner in which the architectural committee was chosen.

It was resolved to avoid, by adding two additional members from both Boston and New York, all local prejudice, which invariably occurs when any small body of men manage an exhibition. The local committee of five was elected by the architects of Philadelphia, as were the gentlemen from Boston and New York, and in that way all feel satisfied that the selection was impartial—even though some over-appreciated mediocrities were not as well represented as usual.

The Richard Morris Hunt Memorial Exhibition in many ways was the most important section of the Exhibition. It consisted of one hundred and fifty drawings and photographs, covering Mr. Hunt's entire professional work. His *projet* drawings, made in Paris back in the sixties, are wonderfully well rendered and very interesting, and after studying his entire exhibit the most critical designer leaves

with the feeling that Mr. Hunt was a masterly draughtsman as well as a great architect. The catalogue, which, by the way, reproduces many of Mr. Hunt's designs, gives a biography of Mr. Hunt's career and a list of his best creations, which is of great interest to all his admirers.

Through an arrangement made by the T-Square Club, four of whose members were on the Philadelphia hanging-committee, a gift of one hundred of these catalogues has been sent to the representative architectural clubs of the country with a note regretting that the reproductive work is not better and expressing a desire for a closer intimacy between the different clubs.

McKim, Mead & White were well represented by a wonderful line-perspective of the Brooklyn Academy of Art and Science, and by some well-studied drawings for the Columbia College Library. Ernest Flagg had half a dozen very accurate graded wash-drawings, those showing the accepted design and alternative scheme for the Washington Cathedral of St. Peter and St. Paul being the most interesting. A large water-color perspective of St. Luke's Hospital, also by Mr. Flagg, was conspicuously hung.

Wilson Eyre, Jr., had a very characteristic exhibition with his usual departure. It is a source of mystery how every year he can find a new medium to work in, and an aptitude for new ventures. This year it is architectural gardens, and very charming they are, too. The "water-color pencil-drawings," for such they are, which showed a perspective and two elevations of a proposed garden for Beauveau Borie, Esq., were enchantingly picturesque, yet academic to a degree. Mr. Eyre's individuality transforms everything he undertakes, and he never leaves anything commonplace after his transfiguring work is done.

Cope & Stewardson had two clever drawings showing portions of the new University of Pennsylvania dormitory system, and Mr. Cope exhibited two sketches made in Spain last summer, which received First Mention at the last T-Square Club Sketch Exhibition. One of the dormitory drawings referred to above was rendered by Mr. John Stewardson, just before his death, and is one of his best bits of rendering.

Edgar V. Seeler had a good exhibition, his principal design being a colored graded wash-drawing for an observatory, etc., for the University of Pennsylvania.

C. Howard Walker exhibited a water-color perspective for the re-arrangement of Copley Square which is well rendered and full of good suggestions. Mr. Peabody, of Peabody & Stearns, had three frames of delightful pencil-sketches made during a trip abroad.

The Beaux-Arts Society's competition drawings were plentiful, and the P. D. Club of Boston and the Philadelphia T-Square Club were well represented. Among the drawings representing the latter organization, two First Mention designs by Albert Kelsey, President of the Club, were conspicuous. Lloyd Titus had a well rendered gateway, also a First Mention design, and Adin B. Lacey showed his design for the same subject which won second place.

By far the best set of competitive designs, however, were those of Mr. J. Russell Pope, which won him two scholarships and sent him abroad for two years. The subject was a bank for savings, and the solution, as shown by his designs, is admirable. The rendering is clear and strong, and his perspectives show much individuality.

R. G. Kennedy exhibited a memorial school building for the Home of the Merciful Savior.

Frank Miles Day showed an elevation for the Medico-Chirurgical Hospital, and Louis Herman Duhring exhibits his silver-medal design for a grand staircase.

The character of the Exhibition is less pictorial than heretofore, and for that reason a little uninteresting to the public, but very instructive to the profession.



#### WASHINGTON CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

AT the regular monthly meeting of the Washington Chapter of the American Institute of Architects, held Friday evening, February 7, 1896, the following resolution was passed:

We, members of the Washington Chapter, American Institute of Architects, wish, both as a body and as individuals, to protest against certain statements published in *Harper's Weekly* of December 28, 1895, the *Utica Globe* of January 18, 1896, and other papers of recent date, in which Mr. Edward P. Casey, son of Gen'l T. L. Casey, is put prominently forward as the Architect of the new Congressional Library Building in this city.

We are familiar with this building from its beginning to the present time, and feel that no one can, with propriety or honesty, be entitled to the credit as architect of this building except J. L. Smithmeyer and Paul J. Pelz. They have devoted the best years of their lives, from 1873 to 1893, in perfecting the plan and in designing the exterior and interior of this building.

Official documents prove that the work was commenced by act of April 15, 1886, under the direction of Smithmeyer & Pelz, Architects. In 1888, Gen'l T. L. Casey, father of the alleged architect, was

placed in charge, with directions to complete the building according to the drawings of Smithmeyer & Pelz, omitting four of the stack-rooms in the interior courts.

When Paul J. Pelz was discharged, March 29, 1892, Gen'l T. L. Casey, U. S. A., wrote him that "as you have entirely completed the designs for the architectural characteristics and features of the building for the Library of Congress, both of the exterior and interior, . . . I have to state that your services will be no longer required by the Government." The alleged architect, Edward P. Casey, was not employed in any capacity on the building before this date.

We desire, in justice to two members of our profession, that the press of the country will publish this protest, and we further recommend the American Institute of Architects to take official action in reference to the matter.

(Signed) ROBERT STEAD, *President.*  
GLENN BROWN, *Secretary.*



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

HOUSE OF GEORGE B. CARPENTER, ESQ., DEARBORN AVE., CHICAGO, ILL. MESSRS. TREAT & FOLTZ, ARCHITECTS, CHICAGO, ILL.

[Gelatin Print, issued with the International and Imperial Editions only.]

A PORTE COCHÈRE AT VERSAILLES, FRANCE.

WAYNE COUNTY JAIL AND SHERIFF'S RESIDENCE, DETROIT, MICH. MESSRS. JOHN SCOTT & CO., ARCHITECTS, DETROIT, MICH.

PASSENGER-STATION OF THE BALTIMORE & HARRISBURG R. R., YORK, PA. MR. J. A. DEMPWOLF, ARCHITECT, YORK, PA.

HOUSE OF M. K. GREEN, ESQ., JAMAICA PLAIN, MASS. MESSRS. RAND & TAYLOR, KENDALL & STEVENS, ARCHITECTS, BOSTON, MASS.

STAIRCASE HALL IN SAME HOUSE.

HOUSE FOR MESSRS. HARRIMAN BROS., ANNISQUAM, MASS. MR. D. H. WOODBURY, ARCHITECT, BOSTON, MASS.

[The following named illustrations may be found by reference to our advertising pages.]

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. III: THE FARMHOUSE OF THE PETIT TRIANON, VERSAILLES, FRANCE.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. IV: PARK ENTRANCE GATE, CHÂTEAU DE MUSSAIN, SAINTES, NEAR BRUSSELS, BELGIUM.

A GROUP OF AZTEC AND HEBREW DWELLINGS.

A GROUP OF FIREPLACES.

[Additional Illustrations in the International Edition.]

STUDY FOR THE RESTORATION OF THE PORTA PALLIO, VERONA, ITALY. M. PONTREMOLI, ARCHITECT.

[Copper-plate Photogravure.]

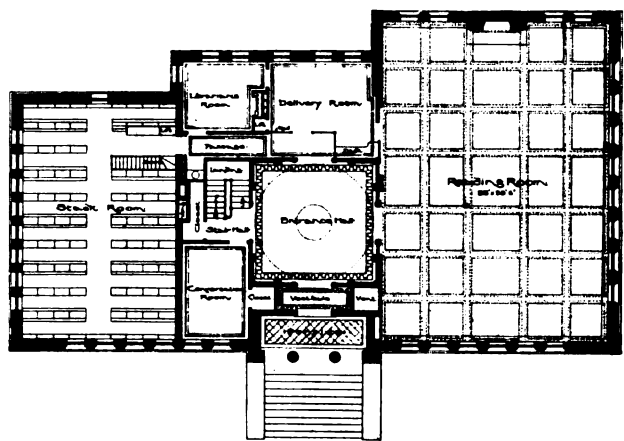
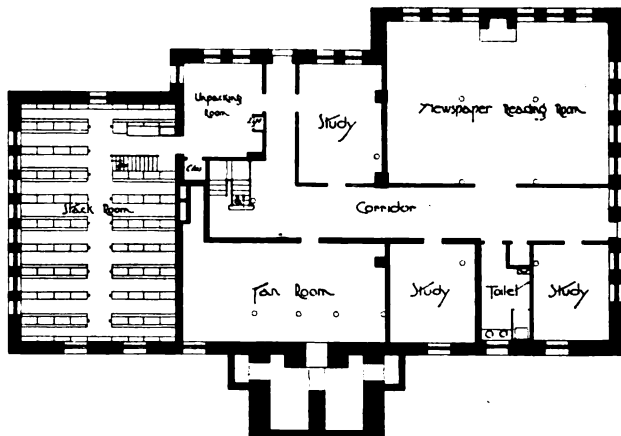
CHRIST, FROM THE NORTH PORCH OF THE CATHEDRAL AT RHEIMS, FRANCE.

[Copper-plate Etching.]

HILLS LIBRARY BUILDING FOR THE NEWTON THEOLOGICAL INSTITUTION, NEWTON CENTRE, MASS. MESSRS. RAND & TAYLOR, KENDALL & STEVENS, ARCHITECTS, BOSTON, MASS.

The building stands at the summit of the high hill known for many years as Institution Hill and fronts to the north, commanding a wide view, overlooking the surrounding country. The building is Greek in general style and has a handsome entrance portico of the Ionic order with pediment roof, and is constructed of yellow brick with stone and terra-cotta trimmings, upon a basement of Milford granite. Internally, it is divided into a stack-room, which is a fire-proof apartment three stories in height, only two of which are completed at the present time, and ample reading and study rooms.

The main reading-room is on the entrance floor and will be called the Hatshorn Memorial Hall. Between this and the stack-room are the librarian's offices and delivery-room. The entrance is through a central domed hall which leads, on the right to the reading-room, on the left to staircase and parlor, and opposite the entrance, to the delivery-room, offices and stack. In the basement



story are study-rooms, an unpacking-room, a large newspaper reading-room and the heating and ventilating apparatus. A mezzanine story contains ladies' toilet and parlors above the librarian's offices. The interior finish is in quartered oak, with hardwood floors throughout. The library is planned to accommodate 50,000 books now, with an ultimate capacity of 75,000, and cost about \$45,000.

THE CHANCEL: ST. PETER'S, EATON SQUARE, LONDON, ENG. SIR A. W. BLOMFIELD, ARCHITECT.

The church of St. Peter was erected seventy years ago, at a time when orthodox people believed it was necessary to pass to their devotion under a portico with Classic columns, and to be surrounded by chilling walls when they desired to have some fervid moments. So acceptable was a second-hand paganism of form to the early Belgravians, that when the church in Eaton Square was destroyed by fire about ten years after its erection it was rebuilt without the introduction of any change in its appearance. It was supposed to suit the *genius loci* by its extreme respectability. There was accordingly extraordinary courage shown by Sir Arthur Blomfield when he proposed to transform the interior of the church, and while leaving the exterior in its dignified coldness, to employ mosaics, stained-glass, gilding and color in order to endeavor to impart some warmth within. The architect was restricted in many ways. Semicircular-headed windows had to be respected and, worse still, the cumbrous galleries. The illustration shows some of the changes, but to produce their full effect it is necessary that the reader should be acquainted with the church in its original state, or should spend a little time considering the outside of the building before coming on Sir Arthur Blomfield's needful innovations.

PUBLIC RECORD OFFICE, LONDON, ENG. MR. JOHN TAYLOR, ARCHITECT.

This new building in Chancery Lane, which was completed in the autumn of last year, forms an important part of the whole scheme for the extension and enlargement of the Record Office.

It stands clear from and rises well up above all buildings in the immediate neighborhood, and in its general treatment follows the design of the portion erected by Sir James Pennethorne about forty-five years ago, and with which it will eventually be connected, the floors and ranges of windows being kept at a corresponding level, with that object in view.

The entrance gateway, which is placed in the centre of the façade, is both wide and lofty, having a groined ceiling. On the east face above the inner arch of the entrance are niches containing statues, the lower one representing Henry III, the founder of the original house called *Domus Conversorum*, an asylum for converted Jews, and the upper one that of Edward III, who granted the keepership of it to the Master of the Rolls. Just beyond the inner gateway on the north side are the dilapidated and greatly mutilated remains of the Rolls Chapels. When the next block is added, connecting the present new building with the older portion erected by Sir James Pennethorne, the site of the chapel will be occupied by a building specially treated and of similar proportions to the chapel, in which the monuments will retain their present position and be attached to the present walls, having been carefully cased-in to preserve them until they are once more under the shelter of a roof. The stained-glass which has been removed from the present window-openings of the chapel will be replaced in the windows of that portion of the new building.

The whole of the north wing is arranged as repositories for the storage of public records, each room being specially constructed, provided with iron doors and fitted with iron racks and slate shelves, two stories in height, on each floor.

The south wing accommodates the staff, and contains a library and librarian's room, specially fitted with a combination of steel and wood cases and shelves.

Great care has been taken to make the building as fireproof as is possible, the floors being constructed of steel joints and concrete, the staircases of stone and iron, iron doors to the repositories, windows having stone mullions and steel lights, and the roof being entirely of iron, with cast-iron cover-plates having rolled lap-joints. The only woodwork in the structure of the building is the oak block floors, which are embedded on concrete, and the necessary doors, screens and cases in the south wing occupied by the staff.

The cost of the new building and fittings has been about 85,000*l.*



**BOSTON, MASS.**—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895:* at the Jordan Art Gallery, 450 Washington St.

*Paintings by John and Bancel La Farge:* at Doll & Richards Gallery, 2 Park St., February 14 to 26.

*Pastels by J. Wells Champney:* February 10 to 22, at Williams & Everett's Gallery, 190 Boylston St.

**BRIDGEPORT, CONN.**—*Second Annual Exhibition of Pictures:* at the Public Library, January 25 to March 15.

**CHICAGO, ILL.**—*Works by Gustave Doré:* January 21 to March 21, *Swedish Paintings:* February 4 to March 1, at the Art Institute.

**CLEVELAND, O.**—*Joint Exhibition of the Cleveland Art Association and the Cleveland Architectural Club:* at the Garfield Building, opened February 10.

**NEW YORK, N. Y.**—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Twenty-ninth Annual Exhibition of the American Water-color Society:* at the National Academy of Design, February 3 to 29.

*Eleventh Annual Exhibition of the Architectural League:* at 215 West 57th St., February 15 to March 9.

*Paintings by Philip Zilcken:* at the Macbeth Gallery, 237 Fifth Ave., February 17 to 29.

*Symbolistic Paintings by P. Marcius-Simons:* at the Avery Galleries, 368 Fifth Ave., February 7 to 22.

**PHILADELPHIA, PA.**—*Sixty-fifth Annual Exhibition of the Pennsylvania Academy of Fine Arts:* opens December 23, closes February 22.

**PROVIDENCE, R. I.**—*Water-colors by Ross Turner:* at the Rhode Island School of Design, February 15 to 29.

**SPRINGFIELD, MASS.**—*Nineteenth Annual Exhibition of Paintings:* at James D. Gill's Gallery, until February 29.

**ST. LOUIS, MO.**—*Drawings of London Society, by George Du Maurier:* at the Museum of Fine Arts, until February 22.



**THE SPANISH CHURRIGUERA STYLE.**—In the reign of Charles II, when taste was vile and morals corrupt, when the golden bribes and gilded rococo of Louis XIV tyrannized over England and Spain, when Italy with her Guarinis and Borrominis, Naples with her "guglias"

and gaudy extravagances furnished a new infection of conceit and the absurd—"le dégoût du beau amène le goût du singulier"—and Spain, sated with Herrera, turned to prey on foreign garbage, then license succeeded to rule and everything became a lie. The age was one of gold in metal, but of lead in art, and never was religion more crusted over with tinsel ceremonials or more stripped of realities; never was the temple more prostituted by pagans than by bunglers who, calling themselves artists, made up with barbaric ornament their want of sentiment and design. The terms by which Spaniards denounce this degraded style are derived from José Churriguera, of Salamanca. The master was out-Heroded by his disciples, Narciso Tomé, Geronimo Barbas, Simon Gavilan and others—"non ragioniam di lor." The Churriguierists were cursed with a depraved invention, which seldom succeeds in an art so fixed as is architecture. Stone and iron, wood and solid substances were now tortured, in defiance of material and propriety, into sculptured pictures of spirits of the air, sunbeams and ethereal transparencies; forests of Sorian pine were carved into fricasees of flying angels and daubed with gold-leaf. Madrid, although deficient in fine Roman, Moorish, Gothic and cinque-cento art, is rich in this rococo, which came well devised for a fungus town that sprouted out of the decay of the older capitals. A pet specimen is the façade of the Hospital de San Fernando, at Madrid, erected by Ribera in 1726, which certainly entitles both inventor and admirer to an admission into Bedlam. Another gem is the *Trasparente* in the Toledan cathedral, constructed by Tomé, in 1723, and then considered the eighth wonder of the world. As the Court set the fashion, scarcely an edifice in Spain escaped these harpies, who were worthily succeeded by Royal Academicians. These, with their chairs, chains and centralization, were the inventions of Philip V, who came, according to Cean-Bermudez, himself an R. A., to crush ignorance and false taste with a strong arm. He created an artistical inquisition, which watched over architectural heresies, and whose approval was requisite before any new edifice could be erected. Thus the intellect of the nation was fettered by conventionalities, and every opening closed against private judgment and individual mind. Coldly correct and classically dull, these retrospective censors endeavored to resuscitate an alien artificial style, which neither affected the Spaniard at large by associations with the past, nor by intrinsic excellence, nor by conformance with existing wants, creeds and social habits; hence the soulless, savorless piles of commonplace, the feeble veneerings of the ideas of other ages and men, that weigh upon the Peninsula and bear the mark of the beast. The apostle of this learned eclectic mediocrity was Ventura Rodriguez, the Mengs of brick and mortar. To him, the "restorer of Spanish art," succeeded Juan de Villanueva, who fixed, says his friend, Cean-Bermudez, "its most brilliant epoch." Few, however, who glance at the heavy Museo of Madrid will agree in this eulogium, "*Tous les genres sont bons, hors le genre ennuyeux.*" If these bores in building be right, then your Berruguete, your Herrera was a blockhead—"rien, pas même académicien." These pedants not only prevented the restoration of the Gothic and national styles, as occurred with us, where Anglo-Saxon energy has shaken off the foreign incubus, as the lion does a reptile from his mane, but encouraged the mutilation of many of the grandest works of better men and periods. Churches and cathedrals, wherever the clergy were rich and tasteless, were remodelled and "beautified." Grecian façades were stuck on to Gothic fronts, until insides and outsides were alike shorn of unity and propriety—witness the incongruities which disfigure the ancient cathedrals of Lugo, Pamplona, Gerona, Badajoz, Valencia. The first modern building in Spain is the royal palace at Madrid, which was erected for Philip V by Sachetti, an architect of Turin. It is altogether Italian in its merits and demerits, and as perfectly un-Spanish as are the two summer residences of the Bourbons—that at Le Granja being the work of Juvara, a Sicilian; the other at Aranjuez, done by Bonavia, a Lombard. Philip V presided at both, and there is no mistaking their ultra-French character.—*The Architect.*

**NEW STATUES AT ROME.**—Six statues were unveiled in Rome between September 20 and October 2, 1895. It has evidently been a very good year for statues in the Eternal City. One is to Garibaldi on the Janiculum Hill; one to Cavour in front of the Law Courts in the Prati di Castello; one to Marco Minghetti in the Piazza San Pantaleo, nearly in the centre of the city; one to the dramatist Pietro Cossa at the opening out of Via Arenula, near the Argentine Theatre; another is the column of Porta Pia which has been placed in front of that stretch of the Aurelian wall in which the historical breach was made by the Italian soldiers, September 20, 1870. The last is the monument of Villa Gloria outside the Porta del Popolo; it is erected on the spot where the Cairol brothers fell, martyrs to the Italian cause, in 1807, near the historical almond tree. The monuments are all of great beauty, and constitute a real glory for modern Italian art.—*Invention.*

"FLATS," FROM THE UNDERTAKER'S STANDPOINT.—"There are flats," said an undertaker, "that appear to have been built with a view of getting people in, but not with a view of getting them out. It is a work of difficulty to take a casket down the stairs, and great care is required. If there is an elevator, the casket is carried down on that if it is large enough; if there is not room for the casket directly across, it may be placed in the elevator cornerwise; but it is not taken down in an elevator unless there is room for it to rest entirely upon the floor; if otherwise, it is carried down the stairs. If a funeral is held upstairs, it is better not to let the casket be carried down by honorary pall-bearers, but to have it carried by professional pall-bearers, who know best how to handle a casket under such circumstances."—*Philadelphia Telegraph.*

**BYZANTINE REMAINS NEAR SEBASTOPOL.**—Recent investigations not far from Sebastopol have yielded some new and interesting finds. Near what is known as the French Cemetery the discovery was made of what must have been the site of a very large Byzantine city, and objects of Classical Greek art of great beauty have been brought to light.—*N. Y. Times.*



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**SUMMARY:—**

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Accessories of Landscape Architecture, No. V: Casino and Terrace, Monte Carlo.—Accessories of Landscape Architecture, No. VI: The Terrace, Monte Carlo.—The Sanchi Tope, Bhopal, India.—Sketches at Baalbek, Etc.

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**B**OSTON, in a quiet way, has already made an experiment which has been much discussed, but not actually duplicated, in New York, in the establishment of public baths, for use in winter as well as summer. In the warm season, the floating-baths, for which Boston affords excellent facilities, are very much used, and, undoubtedly, contribute a great deal to the health of the city, but baths for winter are a comparatively expensive luxury. However, the city maintains, in its Charlesbank Park, a gymnasium, which is open all the year round, and this winter the facilities which it affords have been utilized to furnish regular baths. The public of the region in the neighborhood of the park, which is occupied by a very modest class of citizens, have gladly availed themselves of the new opportunity for winter bathing, and it is intended to repeat the experiment another year, probably on a more extensive scale.

**I**N connection with public bath-houses, the utility of which no one will question, it is common to speak of public laundries, or wash-houses, as if they were in some way dependent on one another. To our mind, although the fact that water is used in both gives them an apparent relationship, the cause of improving the condition of the poor will be, in this country, best served by keeping them apart. In London or Paris, where poor people have to live in houses without a public water-supply beyond that afforded by a hydrant in the backyard, the provision of places where women can have tubs and hot water, at a small charge, is almost necessary, but with us it is so common to provide tenements with tubs, that, as it seems to us, an effort to make such provision more general is better directed than if expended in urging the erection of public laundries. In London, the charge for the use of a tub for three hours, which would be a very moderate week's wash, is nine cents; and, after the third hour, the price is raised to twelve cents an hour. It would be interesting to know how many women get their washing finished within the three hours; but even at nine cents a week, the cost of using the public tubs would do a good deal toward paying the rent of wash-tubs at home; and washing at home, for three hours in the week, is, in many respects, preferable to going to the public laundries. To say nothing of the facilities which the latter offer for the idle gossiping which does so much to undermine the thrift and

self-respect of poor women, the trip to the public laundry involves several hours' absence from home, and from the care of the children of the family, who suffer accordingly. Whatever may be good for Latins, or Germans, or Englishmen, the cardinal principle to be kept in mind in guiding the development of American life is to promote the comfort and attractiveness of home. In many ways the home life of the poor is more affectionate and intimate than that of the rich. The members of a poor family are more dependent upon one another, and more accustomed to make sacrifices for one another, than their wealthier neighbors. The poor mother is amply compensated for her loss of fashionable enjoyments by being always with her little children; and poor children, as they grow older, find a happiness in working, in their childish ways, for the comfort of the household, such as richer ones seldom know. Every one who has been much among our poor can testify to the unselfishness and affection of their family life, and the importance of guarding against anything that tends to disturb it. The part that beer and whiskey play among the men in breaking up family ties, and fostering neglect of family duties, gossip plays among the women; and schemes for ameliorating the condition of the poor should be scrutinized as carefully with regard to their moral as their material tendency.

**M**ANY people, probably, were rather indignant at reading in the daily papers, a few days ago, that the tomb in Boston, in which lie the remains of the painter, Gilbert Stuart, had been opened, and that the body was found, considering the circumstances, in good preservation. One lady, whose ancestors owned the tomb, and gave permission for Stuart's interment there, and were afterwards themselves buried beside him, wrote to the *Tribune* on the subject, complaining of the discourtesy with which the tomb had been opened, without any notice to its present owners; and Mr. Robinson, the Secretary of the Stuart Memorial Association, which had authorized the proceeding, replies to the letter of Miss Howland, explaining that a handsome bronze tablet was to be placed upon the tomb by the Association, and it was necessary to ascertain, before designating the place in this way, whether Stuart was actually buried there. If Mr. Robinson, or any of the officers of the Association, had known that there were living persons interested in the tomb or its occupants, they would have asked their permission to open it; but, not knowing of the existence of any such persons, they had simply obtained the consent of the Board of Health, as the law requires, and had conducted their investigation with the reverential spirit becoming to those who disturb the resting-places of the dead.

**I**T will be remembered that, some time ago, Richard Smith, a wealthy type-founder of Philadelphia, bequeathed to the city the enormous sum of five hundred thousand dollars, to be expended upon a gigantic monument to himself, to be erected in Fairmount Park. After a good deal of consideration, the Park Commissioners decided to accept the bequest, and the memorial is to be erected as the donor wished. What it is to look like we do not yet know, but it seems to consist mainly of a central tower, or hollow shaft, surrounded by pedestals, on which are to be set statues of distinguished persons, mostly Pennsylvanians. Among these are to be commemorated Generals McClellan, Hancock, Meade and Reynolds; and bronze busts of Governor Curtin, Generals Hartranft, Beaver and Crawford, Admirals Porter and Dahlgren, Mr. John B. Gest, the executor of the estate, and Mr. James H. Windrim, the architect of the memorial, are to be provided. Near the entrance-door is to be a statue of the donor, and the shaft is to bear the inscription “Richard Smith, Type-Founder, of Philadelphia.”

**M**R. EVANS, a member of Congress from Kentucky, has introduced a bill to provide for the erection at Washington of a monument to Abraham Lincoln. As Mr. Evans says, the people of the whole country now cherish for the character of Lincoln an admiration which has no adequate expression anywhere, and perhaps least of all at Washington, the city most closely connected with his great career. It is curious that, so far as we know, the only memorial in existence

to Lincoln which can really be called impressive is to be found in London, where the beautiful "Lincoln Tower" of Dr. Newman Hall's church, conspicuous from the railway trains entering the city from the south, appeals with singular force to the mind of the American traveller. What sort of monument should be erected, Mr. Evans does not say, but he thinks that half a million dollars would not be too much to spend on it, and in this we think that the whole people, from Maine to Texas, will agree with him.

WE are sorry to hear that there is a prospect that more work may be done on the Brumidi frescos in the Rotunda of the Capitol at Washington. It is now some ten years since the execution of this huge architectural joke was suspended, as we hoped, forever. It appears, however, that some one has had the brilliant idea of making the last panel but one portray "The Driving of the Last Spike," that is, the last spike in the track connecting the Union Pacific and the Central Pacific Railroads. Unsympathetic financiers would probably like to see this work of art accompanied by a pendant, representing the Getting-Back of the Last Dollar that the people of the United States invested in these enterprises; but it appears that only one panel will be left, after the spike picture is completed, and it is desired to reserve this for a "condensed representation of the principal buildings of the Centennial Exposition." The particular attention of the lovers of scale in architecture is invited to this last scheme. To represent two railroads, each about a thousand miles long, on a panel two feet square, would be an achievement worthy of Brumidi's genius, but this feat is insignificant in comparison with that of condensing the Philadelphia Exposition into the same compass; and the effect of this miniature, placed beside the groups of struggling figures which bump their heads against the upper border of the "frieze," will be something indescribable.

IT will make architects feel poor, we imagine, to hear that Mr. Mansergh, the engineer of the new water-works for the City of Birmingham, England, has already been paid one hundred and two thousand pounds, or more than half a million dollars, as his commission on the cost of the work carried out under his charge. It is true that Mr. Mansergh earned his money by a good deal of hard work, some four thousand drawings having been made in the office for various details of the plan; but architects have to do, in proportion, much more than this for their pay. However, no one will envy Mr. Mansergh, who is well known by reputation among architects as a thoroughly sound and skilful engineer; and the principal reflection which the matter will arouse in the minds of our readers will probably be that engineers are, somehow, much better paid than architects, for work requiring no more time, no more skill and no more experience, than architects bestow on their undertakings.

WHY this should be so, we will not attempt to explain. Our own idea is that the most important factor in the financial degradation, so to call it, of architects as compared with the members of other professions of similar requirements in the way of learning, fidelity and skill, is the prodigality with which they offer their services in competition with one another, or as a matter of pure speculation. Matters are, in this respect, not so bad as they were twenty years ago, when, as a man said, he could not walk down Broadway without being besieged by a crowd of architects, begging the privilege of "submitting sketches" for a new store that he intended to build; but they are bad enough still; and those who have the good of the profession at heart should not fail to call attention from time to time to what yet remains of the evil. Architects old enough to remember the professional life of twenty years ago will probably agree with us that, as the humiliating rivalry in the profession has diminished, the lot of architects in general has improved. The average professional income has certainly increased, clients have become more considerate, and pay more respect to their architect's opinions, and the latter is slowly, but surely, gaining ground as a person who possesses knowledge and taste which are worth purchasing at a fair price. More than this, the growth of friendly feeling among architects, fostered by the professional associations, has done a great deal to destroy the efficacy of the system of playing off one architect against another which used

to be so effective in reducing the cost, to owners, of professional service; but much still remains to be done; and, if the present standing of the profession is to be maintained, or improved, this must be done by observing, with increasing strictness, the rules of professional honor and fraternal loyalty, which have already done so much to improve the practice of architecture.

*LE GÉNIE CIVIL* gives some interesting information in regard to the X-rays, discovered by Professor Roentgen, which have been the subject of some further experiments in Paris. As most of the "cathode" photographs published bear evident traces of having been touched up, to say the least, by human agency, *Le Génie Civil* gives three half-tone cuts from actual plates, which have undergone no retouching whatever. One of these is of a frog, lying on his back. This shows the skeleton very plainly, together with what appear to be traces of the circulatory system. Another shows the same frog lying on his stomach. In this the skeleton is fainter, the bones being removed farther from the sensitive plate. The same cut shows a pair of eye-glasses, and some scissors, the glass appearing to have nearly the same opacity as the scissors, while the tortoise-shell rim of the eye-glasses is nearly transparent. It seems that M. Perrin, instructor in Physics at the Paris Normal School, had for some time been studying the cathode rays, and on the announcement of Professor Roentgen's recovery, was in a position to repeat his experiments at once, adding others. Through these experiments he discovered, by placing two screens between the vacuum-tube and the sensitive plate, one with a very narrow slit in it, and the other with a larger one, that the X-rays suffer no diffraction under such circumstances. They are also incapable of reflection, although the cathode rays, by which the X-rays are produced, are said to be reflected by metal plates; and no substance yet tried refracts them sensibly, although Professor Roentgen, by using prisms of ebonite and aluminium, thought that he obtained a slight deviation. M. Perrin, however, made a prism of yellow wax, and placed it in the path of a beam of X-rays, so as to intercept one-half the beam. The beam, which was obtained by a screen with a narrow slit in it, was then allowed to fall on a fluorescent surface. The fluorescence showed the image of the entire beam, without the slightest deviation at the boundary between the portion coming through the wax prism, and that passing without interruption, showing that no refraction took place.

HIGH-SCHOOL boys and girls will be glad to hear that a Spanish engineer, M. Torres, has invented a machine for solving algebraic and arithmetical equations of all sorts, including equations of any degree, containing any number of unknown quantities, provided, of course, in the latter case, that a sufficient number of equations is given to enable the necessary substitutions to be made. The principle of the machine, as stated by M. Maurice d'Ocagne in *Le Génie Civil*, consists in representing the variables by certain displacements, which may have any possible value, and connecting these displacements by geometrical movements, in such a way that there shall exist between the displacements, at each moment, the same relation that the equation establishes between the variables represented by the displacements. This sounds simple, but the carrying-out of the principle is not so simple. It would take too long to describe the machine, even if the description would be intelligible without diagrams; but the most striking feature of it is a gearing in which a toothed wheel runs between two cones, around each of which is wound spirally a toothed rib, gearing with the spur-wheel between them. Evidently, by the revolution of the cones in opposite directions, the middle wheel is displaced in two directions, its axis of rotation remaining constantly parallel with those of the cones, and in the same plane with them, and the speed of rotation of one cone must diminish as that of the other increases. Ingenious people of a mathematical turn of mind will see how far this device, or rather, combination of such wheels and cones, may be utilized to represent relations of variables. Until now, M. Torres has constructed only one machine, which he has used for studying out his system; but he has engaged M. Carpentier, of Paris, a noted mechanic, to build others, in a somewhat simpler form, which will undoubtedly become objects of great curiosity in the scientific world.

THE GARDEN IN RELATION TO THE HOUSE.<sup>1</sup>

I THINK, as a nation, we are beginning once more to realize the charm of a formal garden. For the last few decades we have been passing through a period of architectural taste, called the Gothic revival, and, sated with the dry bones of antiquarianism, we are beginning at last to infuse a breath of life into some few of our buildings. And it is natural that the growth of interest in this direction should be accompanied by a wish to give them some proper and dignified setting. Now this is a part of architectural design that has, for rather more than a century, been practically overlooked. In England, up to the time of the Georges, there was still some survival of it, as is evident from the plans of country seats to be found in Campbell's "*Vitruvius Britannicus*"; but some, if not most, of these schemes were only carried into execution in so far as the main building was concerned. And I think it is not over-stating the case to say that, up to the middle of the last century, no architect thought his design complete until the "available ground in the immediate vicinity had been considered with relation to the building itself.

For a brief sketch of the history of the subject—in England, at any rate—it is not necessary to go back farther than the time of Henry VIII. Up till then the monasteries had been the chief homes of cultured retirement, and of the art-loving world; but, at their suppression, the scene changed, and it was in the houses of a nobility, suddenly enriched with monastic plunder, that the arts took refuge. New ideas from Italy and the East found a ready welcome in England, and the seed fell on a good soil for architecture, the courts of Henry VIII and Elizabeth dearly loving lavish display in that direction. No sooner had the monastic buildings become untenanted, than there began to rise palaces of pleasure all over the land; and their gardens, too, were stately, as befitted the jewels of which they formed the setting. Moreover, with peaceable times, there was no longer the feeling of insecurity that had necessitated a semi-fortified seclusion. The wind was now the only foe to be kept at bay, so enclosures expanded to more liberal dimensions, and delicate grilles of hand-wrought iron made the exits and the entries into courts of green or parterres gay with flowers.

It is one of the drawbacks of this subject that we cannot study the fine old examples under the same conditions as buildings, and I cannot think of a single instance of an Elizabethan garden that has not undergone so much alteration in later times as to be almost unrecognizable. Even where the architecture remains fairly intact, nature has been at work, obliterating the original design by slow degrees.

Here<sup>2</sup> is a view of the terrace steps at Haddon, which all of you will recognize. Perhaps there are few places that have been so fortunate in escaping the hand of the destroyer. And that is why I have chosen it, for there is just sufficient left to help us in picturing the garden as it was. Any one who has been there will remember the mysterious gloom under the great yews on the terrace, and will have pictured to himself perhaps, the elopement of Dorothy Vernon under the selfsame boughs. But in her day we must remember these knotted trunks were young, and the stones that now lie in disorder about their roots once bordered well-kept paths. In fact this natural wilderness, so near to the house, was no part of the original intention, and in those days would have been kept farther afield. Here is another view as it probably was. The grove that nowadays covers the terrace has given place to a garden, and the great yew-trees are shown—as, perhaps, they were—clipped into heraldic devices taken from the family coat. Against the terrace wall there is a rich border of flowers, and the hedge that skirts the path is trimmed to its original proportions.

A house of the time of Elizabeth was approached through an avenue and one or more courts in quiet tones of green and gray. Out of this arose a stately mass of buildings—two wings and a centre-piece—with broad, retreating shadows between, sparkling with myriads of small panes set among softly-moulded mullions. Through the walls on either hand festooned with a wealth of climbing roses, there would be splashes of sunlight and color from garden courts beyond, while at the back the brewhouse, offices, etc., would be screened off from garden courts and orchards by walls of ample height. This view of the forecourt at Canons Ashby will serve as an example, but the type was infinitely varied.

If there is one thing that was more characteristic than another of the pleasure-grounds of the past, it was this system of enclosure and subdivision, and to my mind when that was abandoned the main charm of the old English garden vanished. Sir Walter Scott once raised his voice in lamentation over the destruction of an old garden he had known as a boy, and perhaps you can each remember some Old World pleasure falling into the hands of the modern landscape-gardener. I have vivid recollections of just such a garden as Sir Walter describes. It lay on the hillside by an old house in Yorkshire. In the first court as you entered from the shrubbery were beds of brilliant flowers cut out in patterns like a ceiling in the house, and against the south wall were vineries of black Hamburgs and dark mysterious potting-sheds. Then there was the bowling-green, a wide expanse of velvet turf with banks and terraced walks all trim and neat, where apricots and nectarines ripened on the

walls. And one side was fringed with scarlet lychnis and sweet-williams, where the red admirals and tortoise-shells would spread their wings in the sun all day. Then there was the summer-house with a racing fox for a vane, and bowls in a corner cupboard; an apple-house, where the old gardener was always at his best; and last, but not least, Peter the Great's arbor, for there, in defiance of history, tradition had fixed the spot of the Czar's proposal. But an evil day came when the quiet retirement of this unoffending paradise was invaded by the "landscape-gardener." The walls were thrown down, the terraces destroyed and the whole converted into a wilderness of specimen shrubs, for this was the new ideal that had taken the place of the old.

But to return to the time of Elizabeth. It was foreign to the idea of a garden to allow forest trees within the walls. The grove had its place, and that was outside the garden enclosure, where a lofty cliff of green would be more than welcome as a background to fruit and flowers. This view of the garden at Montacute serves to explain my meaning, although the original treatment was rather different from what is shown in the drawing. And it was probably from a wish to obtain a background of even tone that hedges first came to be trimmed. This trimming, or "pleaching," as it was called, which seems reasonable enough on these grounds, was eventually carried to absurd lengths. They had felt the need of single yews to mark the salient points in complicated patterns of flower-beds, and these they cut into a variety of forms; first, into cubes and obelisks, and then by degrees into every shape that fancy might suggest, until at last the repose of the garden was as much hampered by verdant sculpture as Westminster Abbey is with its monuments. The garden at Levens, though beautiful in color, is perhaps the most striking example of this vagary. And since, of course, to keep the yews in shape requires considerable labor, it is hardly surprising that there should be few of the kind remaining. There are one or two rude bits of pleaching at Barncluth, in Scotland, and a touch of quaint humor in the gardener has caused him to fashion a whiskey-still under the prominent nose of a Scotchman in a Tam-o'-Shanter hat. The French influence, that was always more evident north of the Tweed, is traceable in the garden-house, and its curious spiral staircase is an arrangement that I have not seen elsewhere. Green vaults or tunnels of yew are sometimes to be found, and that at Melbourne now forms a rich tangle of intertwining branches, as may be seen from the illustration.

As I have said above, old gardens were divided into several departments, and each of these bore a character distinctly its own: There was the parterre, or flower-garden, with its fountains, and flower-beds in geometrical designs of box; the bowling-green with its garden-house and shaded seats; the fruit orchards, wildernesses, etc. Now some one has described personal charm as an open secret, and that is precisely the character of an old garden. There is more left to the imagination where the whole cannot be seen at a glance. Change of level was another means of gaining effect. The eye is so used to the appearance of things from the ordinary point-of-view that even a slight elevation presents the scene in quite a new light. In this view of Kingston House, though the arrangement of the terraces is sufficiently interesting in itself, still the novelty of the position is mainly due to the point-of-view that has been chosen for illustration. So conscious of this fact was Turner, the landscape-painter, that he habitually raised the point-of-vision in his pictures to a higher level than was really possible. Any one can test this for himself by standing before an object that Turner has painted, and an instance, within reach of any Londoner, that occurs to me at the moment is the old house at Mortlake, of which there was such a subtle rendering in the exhibition of old masters last winter. This house and garden still remain pretty much as they were when the great painter drew his poem from them.

There is always a charm in length of vista that could not have failed to appeal to garden designers. And to give point to the long perspectives that were planned to pass through house and grounds alike, they were adorned at intervals with fountains, statues or other objects of interest. Each of these would form the centre of a network of cross vistas so that sunlight or shadow, front view or profile, should offer the scene afresh as often as it was approached from a new direction. As a simple instance of this we may take the somewhat mutilated fountain at Bolsover Castle. This stands at the intersection of two alleys with hornbeam hedges on either side. Seen from here, it appears a bright object against the curtain of trees and ruined gables of the banquetting-hall. The next alley to the left would give it in a harmony of soft grays, with the grim walls of the castle keep in the background. And here is a view in the grove at Melbourne. This belongs to a later date, when more attention was being given to groves and bosquets, and the architectural principles that had formerly been confined to the garden proper were creeping farther afield, as will be seen by the fountains and hedges farther down the glade. This vase, I may mention, is one of the finest examples of leadwork in England. There is one at Drayton that may be nearly as fine, but I have never had an opportunity of making a drawing from it.

When large sheets of water came to be included in the dressed grounds they, too, were treated in the same formal manner. The most ambitious efforts in this direction were probably of Dutch origin and due to the same energy and skill that made the canals and huge drains of the Fen country. Here are two instances from Wrotham, in Bedfordshire. A T-shaped piece of water, some four

<sup>1</sup> A paper read by F. Inigo Thomas at the Society of Arts, and printed in the *Journal of the Society*.

<sup>2</sup> The references in the paper are to the views thrown on the screen by the lantern.

hundred paces long with broad turf, verges next to the groves — and the fish-pond in a secluded spot in the wood among yew hedges that are now some twenty feet in height.

The development of garden-design may be said to have been the elaboration of these few principles, for the object of the old-time designer was to make a stage on which to play the drama of everyday life, but unlike the stage the scenery was real and the acting an unaffected pleasure in existence, and in the sights and sounds and scents of nature. Difference in locality has, of course, necessitated difference in material, and according as brick or stone was more ready to hand, so the character of the work was restrained or free in its treatment.

Perhaps the period of greatest activity may be placed in the reign of William and Mary, for to that time belongs the English classic on the subject, a fine folio of views drawn by Knyffe and engraved by a fellow-countryman of the name of Kyp. Then we have the diary of Celia Fiennes, a lady who spent some years riding about England and taking a lively interest in the improvements that her many friends and relatives were making to their country places. And to this time, too, belong the great schemes of Wren's devising for the beautification of Hampton Court. But with the progress of the eighteenth century interest seems to have declined. People, perhaps, began to tire of spending the sums that their great schemes must have needed to keep up. Pope struck a note of ridicule, and the stupidity of a decadent age was ripe to hoot them out of fashion. Then came the opportunity of the landscape-gardener. Kent and "Capability" Brown stepped on to the scene, and though they mowed down avenues and destroyed every vestige of dignity under the pretext of "helping nature," they seem to have forgotten how to make a garden. They, again, were followed by Repton, Sir Uvedale Price and a host of minor imitators, who were glad enough, no doubt, to have found a profession for which no previous training appeared to be necessary. To my mind the finest corrective for insanity in design is a knowledge of what great architects have done in the past, and that is what the landscape-gardener always seems to have lacked. Nothing can be more childish than their attempts in this direction, as we all must admit on turning over the leaves of any book on the subject, from Humphrey Repton down to the present day.

On looking back, one cannot help thinking that the change in popular feeling had more to do with expense in the maintenance of an overgrown formality than with the temperate verdict of thoughtful men, for by far the greater number of old English gardens that have come down unaltered to the present day lie before the cottage doors of the laboring classes. Now there is a remark that one often hears, and which always betrays a certain apathy on the subject, namely, that a formal garden is well enough for a formal house, but a natural garden is more in keeping with houses of the present day. This implies, first, that nature has no place in a formal garden — an illusion that a visit to any old garden would soon dispel; and, secondly, that buildings are not essentially formal when it would appear that squaring the first stone or moulding the first brick was the outset of a formal principle that must necessarily continue throughout. With few exceptions, the reign of Victoria has seen wildernesses — more or less neatly kept — pass for gardens. Sir Charles Barry made one or two formal arrangements to the houses he built, but they were a good deal borrowed from Italian instances, and not at all in harmony with English traditions, so much better understood by Nesfield and Devey a little later. There is a popular superstition that all formal gardens in England were either Italian or Dutch; very much on the same principle, perhaps, that all pen-drawing is called "etching" by the casual observer. Now Italy, no doubt, supplied us with many ideas on this subject, as also she did in architecture, but the buildings that arose under Italian influence in Tudor times were so English in feeling, that we have had to call them "Elizabethan." And so it was with gardens, the English tradition coming out so strongly as to render them markedly different from Italian examples. Here is a view of the back of a terrace with two pavilions, in which there is no trace whatever of Italian influence. The octagon form, the battlemented parapet and the shape and mouldings of the windows, are all true Gothic work, from which it would seem that English gardens were formal in design before the arrival of ideas from Italy.

But since Italy is generally accepted as having been the main source from which we drew our inspirations, it may be of interest to look for a moment at what was being done in that country at the time of which we are speaking. A year or two ago I attempted to make surveys of some of the Renaissance villas in the neighborhood of Rome. But from the very dilapidated condition in which I found them, it has been no easy task to piece together the various remains; so I hope you will excuse their incompleteness on this account. I do not propose to give them in any chronological order, but merely to draw attention to points in the design that may seem to bear on the subject of this paper.

Generally speaking, the sites chosen by the wealthy cardinals who erected these villas were on rapidly falling ground well above the fevers of the plain. And the boldness with which they modelled and carved a mountain spur to suit the whims of their architect was truly heroic. This is well brought out in the Villa Mondragone, at Frascati. You can see by this survey that the whole scheme of buildings and surroundings was planned so as to fall on four successive levels. A centre line can be imagined running through from end to end, on which fall the principal features, and a certain sym-

metry is observed on either side of it, for in architectural design symmetry has always been the rule and irregularity the exception. It is noticeable, too, what pains were sometimes taken to preserve this balance even in the most difficult situations. The approach from the road to Colonna, some 600 paces long and bordered with lofty cypresses, parts opposite a fountain in the foot of a great cliff of masonry, and climbs by means of *pentes douces* to the first terrace. This in itself is a rise of 55 feet, and since the original fall of the ground was in a diagonal direction a great deal of masonry was required to bring one end of the terrace to the necessary height. At four points in the parapet there are massive banded columns, each bearing on its summit a slender iron cross. These four huge sentries stand out against the sky and the olive-clad hills with magnificent effect, but their *raison d'être* was not quite so evident until it was found that the great vaults, on which the terrace is supported, were once the palace kitchens, and two at least of the columns were nothing more than ornamental shafts to carry the smoke clear of the windows. This terrace was probably paved throughout with *palombino*, and used for the reception of magnates with their retinues from Rome. But there seems to have been a garden under the palace windows on ground that rises gently to the level of the main court-yard. Here the buildings lie on three sides of a court planted round with rows of elms, the fourth side being divided by a high niched wall from the privy garden. This was laid out with plots of turf in borders of flowers, and two circular fountains in the centre. A fine arcaded loggia by Pausio fills one end, and raised on a terrace opposite is an amphitheatre of inlaid marble fountains. From here a door and flight of steps lead back to the main court entrance, and opposite this a wealth of flowers borders the foot of a great bastion wall that supports the bosquets and vineyards at a higher level still, that is to say, about 150 feet above the level of the avenue. There is one curious thing about this plan that I am omitting to mention, and that is the small garden that lies on the roof of part of the building at about the same level as the great court of the palace. You can judge its position better, perhaps, in this view of the fountain, where a portion of the balustrade appears to the left of the picture. And here is a view of the great terrace, with the fountain and two of the columns mentioned above. The tops of the cypresses in the avenue are just visible over the parapet to the left.

This survey is of a very anomalous scheme at the Villa Torlonia, where no two of the principle objects fall in a line. There are all the features that one is accustomed to find in designs of this kind, but no two are related. The house and forecourt are placed in a corner of the ground, and at right angles to the terrace. There is an elaborate arrangement of travertine stairways, among rose gardens, leading to the terrace, but here a fresh centre is caught up and carried through the groves of ilex to a wide range of fountain-niches supporting a second terrace. Thence, by winding stairs and basin upon basin of gushing water, one reaches the heart of the wood; and here, a circular clearing, with seats at intervals, and a fine fountain pool in the centre that supplies the cascade below. The Italian designer always seems to have made the most of this reservoir, in which the water was collected from the hills before passing on to the various fountains; and since they are often at some distance from the rest of the work, one comes upon them as an unexpected pleasure.

This is a view in the grove at the foot of the cascade I have just mentioned. The cascade itself is hidden among the trees to the left; but here is the front view of a somewhat similar arrangement at the Villa Aldobrandini.

This is a very incomplete survey of the Villa d'Este at Tivoli. It was the work of Pirro Ligorio, about the year 1550, and it is so elaborate in its many details that, to do more than to touch it tonight would exceed the limits of this paper. The garden is bounded on three sides by the town of Tivoli and the d'Este palace; and the fourth looks out over a network of vineyards to the distant campagna. From the palace, which lies along the terrace to the right of the survey, the ground falls with great rapidity for about a third of the distance, and then more gradually to the centre of the garden. At about this point it reaches the level, and is crossed from end to end by three oblong pools, which divide the garden proper from the grove. Here is a view down the length of the pools. The building over the cascade at the far end is the case of a water-organ — which, by the way, was not an unusual adjunct to the garden in old days. This is a nearer view of the organ-case, and what I want you specially to notice in these views of the Villa d'Este is the determination of the designer not to be cheated of his effects for want of sound and durable material. All the structural parts of this garden are built up of rough bricks, mortar or concrete, and covered with plaster of various textures, and in the more finished parts with delicate modelling in *gesso*, or a rough mosaic of colored marbles. Now nothing could well be more at variance with the methods of the English workman at the time of the English Renaissance. He would have far rather sacrificed his effect than gain it in a mean material, and the frank dissimulation of the Italian character was something altogether beyond his understanding.

Here is part of a crescent-shaped flight of stairs encircling a fountain, and this is a row of ninety jets that spans the width of the garden, with ninety panels of modelled figure-subjects from Ovid's metamorphoses, under canopies and heraldic devices. An equal number of masks pour water into two long channels, one above the



other, as seen in the photograph; but all this is now so much covered with soil and moss, that of course it is rather difficult to judge of its original effect.

So much for the Villa d'Este. And now let us visit a spot some forty miles from Rome, where perhaps the most perfect example of a regular type exists in the Villa Lante. Here the gentler fall of the ground has necessitated no great departure from symmetry in design. There are five separate levels, and each of these is marked by some quaint conceit in arrangement. All the main objects of interest lie on the centre line; or if, as in the case of the Casini, they are duplicated, they are plotted at equal distances from the centre.

The lowest level is given to the parterre, a court of 100 paces square enclosed in high walls and tall box hedges. The flower borders are re-arranged in elaborate patterns of clipped box as shown in the upper half of the plan. In the centre is a square pool of about 50 paces, with stone parapet and obelisks at intervals. From the middle of this rises a grand fountain of several stories, crowned by a group of lions and youths supporting the crest of the Montalti. A number of jets play from various points in the fountain, and what with the brilliant colors reflected in the surface, the gentle plashing of the water, and the delicate scent of flowers, no more delightful spot could well be imagined. The house—or "casino," as it is called—is divided into two parts with loggias opening on to this court, and state rooms level with the next above. Here stands the candle-fountain, a circular structure of rather curious design, but of which I have no view to show you. There are rows of fine stone vases to right and left, under the shade of the plane trees, and handsome flights of steps lead up to the next level. Here the centre of a plot of turf, with groves on either side, is taken up with a massive stone table. We are looking down the length of it in this view, and you will notice there is a watercourse all down the centre. In the heat of an Italian summer, one can well imagine the luxury of such a table for dining in the open air. At the end of this court is the giant fountain, so-called from the colossal stone figures on either side of the basin.

Leaning over the balustrade in the centre, you can see what will be clearer in the next view, namely, the claws of a large stone crayfish. Now the Villa Lante was begun under Cardinal Gambara, and in punning allusion to his name, Vignola, the architect, introduced a watercourse in the next court, composed of a chain of the vertebrae of this animal. It is all in stone, of course many times the size of life; and this idea shows a playfulness in Vignola's character that, judging from other works, one would hardly have suspected.

This is a nearer view of the giant fountain. Rather faint, perhaps, as it was taken at sunset. And the next is looking back at the stone table. Over the balustrade, at the far corner of the court, you can catch a glimpse through the trees of the roof of one of the casini.

This is the upper end of Vignola's chain, where the water issuing from a flight of steps begins its course down the body of the crayfish.

The next view is taken across the uppermost court, and shows part of an octagon fountain that fills the centre, and is surrounded by stone seats against a hedge of box. Yew, by the way, is hardly ever used in Italy, as far as I could discover. The sides of this court towards the grove are lined with balustrades and graceful stone columns, that have lost their original purpose, but still look extremely well against the deep green of the ilex.

This, and a similar pavilion, flank the central recess that terminates the garden, and forms a reservoir for supplying the various fountains.

Of all the Italian gardens I have visited, none can compare with the Villa Lante for so much beauty in so small a compass, and I could have wished to show you a view of the lowest court, which is by far the finest, but minor regrets are useless when we remember that photography denies us the charm of color, on which, after all, a garden mainly depends for its beauty.

The chief points to be noticed in these Italian examples are the boldness of the terracing, the quantity and elaboration of the stone-work, the ingenious arrangement of fountains, and lastly, the absence of wide lawns, that give the distinctive character to English gardens. At the Villa d'Este the materials employed are hardly worthy of so great a work; but at the other three villas I have mentioned, stone is used. At Frascati we find the Travertine that is quarried in the neighborhood—a tawny yellow stone something like Ham Hill, and at the Villa Lante the whole of the stone-work is a dark gray-green speckled with black scoriae. This is called "peperino," and is quarried in the hills round Viterbo. It takes a soft white lichen when dry, but under the spray of fountains or in any damp situation it is hardly to be distinguished from bronze.

Before leaving Italy, where perhaps of all countries the treatment of stone or marble in connection with water has received most attention, I should like to show you an instance from the Boboli gardens at Florence. This is an oval lake with an island in the centre. It is rather late in design and is surrounded with balustrades and white marble figures of considerable beauty, but there is a certain want of background or depth of color in the trees that surround it, so that to see it at its best it should be visited towards evening when the shadows are lengthening. Except for this piece of water the Boboli gardens are to my mind much overrated.

For unpretending charm this small stone *barca* in the flower-

garden of the Villa Aldobrandini is difficult to equal. Some of you may remember the exquisite drawing that Mr. Elgood had made of this in his exhibition of "Gardens in many Lands" last spring.

There is something inexpressibly sad in the ruin that has stolen over some of these villas. The stately buildings are tenanted by a few contadini, and vines usurp the paths that once were swept with the robes of cardinals. On the terrace at the Villa Falconieri this solitary figure rises from the parapet, a silent witness of the gradual decay that is going on around him. In the far distance the gray dome of St. Peter's seems to smile defiance at time, and crowds throng the Corso as densely as ever—but here among the scattered fragments at his feet the lizards that climb and blink in the sunshine are all that is left of the gay assembly that once gave life and color to the garden.

With this we may bid adieu to Italy and return once more to England. So far we have been dealing with the history of the past, and now let us pause for a moment to consider what prospect there is of this branch of art taking root again to flourish amongst us in the future. There are, no doubt, many discouraging influences at work to paralyze the efforts of those who would have fine gardens. The general inclination is to procrastinate, awaiting the settlement of social problems that never seem to come nearer solution. And the comparatively recent development of the railroad system has brought dreary villadom in its wake, as well as a fever for travel, that sadly interferes with the contented enjoyment of home life. Perhaps, as time wears on, people will begin to realize that, of their country neighbors, the most contented and happy are not by any means those who spend a large portion of every summer toiling, guide-book in hand, through Continental towns. I have a suspicion that the characters we know in the works of Jane Austen or of Charlotte Brontë drew far more of the real essence from existence than we do, and yet they were stay-at-home people; and perhaps it is only in a country community where people are at home, and at home with one another, sharing their joys and sorrows, and exchanging small kindnesses, that the reality of life is to be found. Here, in our huge metropolis, the half or more of each man's life must almost also of necessity be a closed book to his neighbor; but, on the face of every old garden or building is written the story of lives knit up with each other in a way that is hardly possible in the hurry of modern existence. And behind all this lies the decay of honest sentiment that is, to my mind, one of the saddest features of the age.

However, there is another and a brighter side to the picture. For my own part I have been made conscious of a tendency towards revival among a certain class in the country, by their having allowed such gardens to be added to the buildings I have designed for them. Here is a drawing of one in Dorsetshire, that has been finished and growing into shape some three years or more. The house was of various dates, mainly from Edward VI to Elizabeth, but with other additions down to the present century. The wing to the left, and that containing the dining-hall, it was decided to leave untouched, but the comparatively modern work in the south and right wings is shown in the drawing, rebuilt on the same lines as the older portions. The site of the present gardens was a grass field, falling somewhat from left to right. There were a few trees here and there, and a larch plantation across the windows of the south front. The high road bounded the ground on the left, and a back drive skirted the near side of the field, and continued behind the grove to the back of the house. When the ground was cleared of trees and the roots grubbed up, the soil from the south garden and pool was excavated and removed, to form the terraces round the sunk garden. Lines were laid down to make vistas through the centres of the courts, and sun-dial, fountain or wrought-iron grille placed where most they seemed to be needed. There are three main lines on which the work is planned. One from the south garden gate in the foreground, catches the reflection of the house in the long pool, passes through the doorway in the south front, and out into the court beyond; thence between the piers that are just visible above the roof, and so down the centre of the tennis lawn, and across the pool at the end to the sculptured figure in the yew hedge by the river. Another line, centering with a window in the left wing, passes down the rose garden and through the circular coronet to a niche fountain between the two arches in the foreground. The third is taken from a summer-house in the grove to the right, across the south garden, through the coronet and up a flight of steps, with a wrought-iron gate, to the sunk garden. Here it catches the fountain and continues up another flight of steps to end in a stone seat that projects from the back of the terrace. The water for the fountains is forced up by a ram in the river to a couple of tanks in the roofs of the pavilions, which gives it a fall of about twenty feet to the long pool in the south garden. All the stone-work, with the exception of a little Douling, came from the Ham Hill quarries. It is a warm rust-colored stone, taking a gray lichen, and I have tried to embody some of that variety in the walling that makes such a marked contrast between the old work and that done at the present day.

This is a plan to scale of the general arrangement. It does not take in quite all the work shown in the bird's-eye view, but it may serve to explain some of the points that were not quite clear in the last—for instance, the planning of the grove to the right and the central vistas, which are laid down here with dotted lines.

This is a view of Barrow Court, in Somerset. The place belongs to Mr. Martin Gibbs, who has been plucky enough to carry out the work on a scale almost approaching the boldness of older examples.

Nearly all of what is seen in this drawing is now *in situ*. That is to say, the large stone vases that complete an architectural arrangement at the far end of the central alley were hoisted into position last week. A semicircular balustrade with twelve figure terminals is to take the place of the plain walled bastion in the foreground, but with that exception it may be said to be pretty much as drawn here. I do not mean to say that every feature has been built exactly as shown, for in all such undertakings many drawings are made for every part, and here, for instance, the copper-roofed pavilions at either end of the park wall have been built on the square with stone roofs and finials according to a later design. And the gateway at the far end of the grove has since given way to a circular recess for a figure with flanking piers and ornaments. You will notice two walled sun-traps, one at each end of the terrace. That at the farther end is furnished with hooded seats and a stone table for *al fresco* teas, and set round with shrubs at intervals. The nearer one has an oak arcading on two sides supporting a lead roof, and I hope it will be a tempting spot for an easy-chair and a novel. I should explain that the church and the house—of which a few gables appear on the right—are not my work. The house was originally Elizabethan, but they have both undergone a drastic restoration at the hands of Mr. Woodyear, that has on the whole made them as good as new. I should have much liked to show you a fine scheme of gardens that was prepared some years ago for Lord Eldon, by Mr. Belcher, the architect, and capably drawn in bird's-eye view by Mr. Beresford Pite. How much of this was actually made I have never heard, but there is, I am told, a garden to one of the houses in the Regent's Park which has been carried out on formal principles from designs by Robert Weir Schultz.

All this is very hopeful and refreshing. And now I will show you a sheet of drawings for a small place in Yorkshire which will give, I hope, as clear an idea of the method of procedure as anything I can instance. There is a rule of exhibition at the Academy that forbids more than one drawing being mounted together in the same frame. But in order to explain a building on paper, an architect will be anxious to show it in every aspect, both to scale and in perspective. Accordingly, I attempted in this case to fuse the various drawings into one whole, and thereby avoid the Academy rule. It was allowed to pass, but this explanation must be my apology for the confusion of ideas that it exhibits. Here is a ground-floor plan of the house. The front entrance is on this side, and there is a straight view down the passage and through glass doors onto the terrace. Here is a plan to a smaller scale of the gardens and general arrangement of the grounds. Two rows of poplars line the carriage-drive to a circular walled forecourt and central fountain. Here is the house in block—the stables to the left and walled portion to the right. On the south side of the house a terrace stretches right and left, and returns with crescent-shaped ends to a pair of garden-houses that overhang the river. A central flight of steps leads down to a level lawn some ten feet below this terrace. It is ornamented with a sculptured figure at either end, and railed off from the river between the two pavilions.

It is well, of course, in choosing a site, to depend more upon the masses of foliage that already exist than on what is proposed to be planted, for then the greater part of the effect will not require the lapse of years for attainment. But there is a difficulty at the outset that stands in the way of all such undertakings, for the age of the landscape-gardener, from which we are only just emerging, has left an impression that promises to die hard in the mind of the employer; and that is, that a different hand is required for the grounds to that which designs the house, and, furthermore, that it is time enough to consider the grounds when the house itself is finished. Now what I contend is this—that if an architect has such a limited experience of country-life that he cannot be entrusted with the grounds, he certainly will not be competent to design a livable home in the country. Also, that to place the whole of the designing in the hands of one individual is the only means likely to result in a harmony.

Now, some of you may have expected, in a paper on gardens, to hear more than a passing allusion to flowers and their culture, for surely that is the end for which a garden is made. I can quite sympathize with this feeling, but, at the same time, I think it arises from the common confusion of horticulture with design. The one is the business of the gardener, and the other of the architect. Similarly, it is the business of the latter to design the structure of a building, but excepting, perhaps, within wide limits, he cannot enter into details of furnishing; that must be left to the occupant.

In our towns, and especially in London, where the value of land is prohibitive to most private individuals, the question is mainly one of public pleasure-grounds, and the arrangement of streets and squares so as to set off important buildings to the best advantage. In this the London County Council has done something, and, from what we hear of the proposed boulevard in Marylebone, it appears to be anxious to do more. If this scheme is to be carried out, it will be at the sacrifice of whatever individuality is displayed in the gardens that now border the Marylebone Road. But since many of these have long ago degenerated into mere advertising warehouses, perhaps that is not much to be regretted. By the new arrangement we should gain a fine avenue of trees, and perhaps some color in borders of flowers between them. But there is a regrettable tendency, in municipal gardening, to multiply plots of flowers of uniform color and size, such as we see in Hyde Park. They are, no doubt, a capital lesson in botanical Latin, and very often their

fragrance is delightful, but they would seem to be there not so much for simple enjoyment as for scientific study. To discuss what might have been done in this direction, and what it is still possible to do in London alone, would form ample subject-matter for another paper. It has engaged the attention of Evelyn and Wren in the past, and let us hope that those to whose care the future dignity of our capital is entrusted, will be imbued with something of the same spirit that guided those master minds.

#### DISCUSSION.

MR. H. H. STATHAM thought the fact of such a paper being read was an indication of the revival of interest in formal gardening which had recently occurred. Mr. Thomas had not treated the old school of landscape-gardeners as severely as he might; he might have referred to their proclivities for inventing winding walks and then putting shrubs for them to wind round; and one of the most delightful things he had met with in books on landscape-gardening was the direction to plan the entrance near a corner of the high road with a straight elbow from it, so as to look as if the high road led straight up to it. Since reading that, he had been amused, in going about the country, to observe how often the advice was followed. He quite agreed with the general position that the house and garden were inter-dependent, and that the portion of the latter which was closely connected with the house should be formally laid out in direct relation to the architectural features. Still, he would ask whether there was not a little too much antiquarianism in the line which this revival of formal gardening had taken. Clipped trees, for instance, had been brought up again, not, indeed, in such fantastic shapes as those in the Levens gardens, but he understood Mr. Thomas to recommend the use of trees cut into pyramids and obelisks. He did not say he positively disliked this kind of thing, but it was a question whether that was quite the right way to treat trees, and whether they looked as well in winter in an inclement climate as they did in Italian gardens in the summer. A photograph had been shown of the terrace at Haddon Hall in its present condition, and then a representation of what it was originally, and he must say he liked it better in its present state, where you had the balustrade marking the architectural line, but the trees gave a charm and a nice shade. He thought you might carry out a formal design in the whole garden and yet leave the individual trees untouched. He shared Mr. Thomas's contempt for "Capability" Brown and others, but thought he had been rather too hard on Repton. He was a man who ought to be treated separately; his faults were those of his time, and he came very near being a genius; at all events he was very clever, and his book contained many hints, which if you got rid of the bad taste of his time, showed him to have been a very observant and thoughtful man. He was free from bigotry for his day, and when every one was going in for what was called English gardening, all irregularity, he positively refused to take away an old symmetrical terrace; he acknowledged it was not in the taste of the day, but he refused to admit that gardening was a thing which ought to change with the taste of each generation. He believed it was an error to suppose that a pleached hedge meant a clipped hedge, though he understood Mr. Blomfield was responsible for the literary portion of the book published jointly. He had discussed the matter with him, and thought he had convinced him, by quotations from Shakespeare and other old authors, that it meant "thickly woven," and that it was used in that sense by Tennyson.

MR. EVERARD GREEN said there was one very fine old garden which seemed to have escaped notice, at Ascovy Hall, near Spalding. It was a regular Dutch garden, and an old house and lake, and everything remained *in situ*, almost untouched. It was laid out in the reign of Queen Anne, and had been kept up in the most perfect manner. There was also an ancient garden at Sutton Place, near Guildford, which had still the most wonderful remains. It was very fully described in Mr. Harrison's book on Sutton Place.

MR. HARRISON TOWNSEND said it was quite a pleasure to hear an expert and professor of any of our arts and crafts who was not pessimistic, and who did not regard his art as being absolutely without a future. It might be of some little help to the cheery view Mr. Thomas took to mention that even on the Continent an appreciation of English gardening, and, also, of English architecture and decorative art was beginning to find place. It was within his own knowledge that in two or three cases of houses which were being built in Germany, the whole of the interior treatment as well as the general design, were in English hands; and the German proprietor felt that it would not be doing justice to it unless he followed the line indicated in the paper, and entrusted the exterior treatment of the residence and its environment to the same hands; and though there were certain German characteristics, the whole laying-out of the formal garden, the natural garden and the kitchen garden were mostly on English lines.

THE CHAIRMAN, in proposing a vote of thanks to Mr. Thomas, said he might be congratulated on having been able in his own practice to realize some of his own ideas, a good fortune which did not fall to the lot of every architect. It occurred to him during the reading of the paper, whether the formal garden should not be on rather a small scale. One saw every day, in the laying-out of new streets, etc., the mistake people made by drawing things which looked well on paper, but which, owing to the scale on which they were carried out, lost a great deal of the intended effect. Regent Street was a familiar instance. It consisted of a succession of

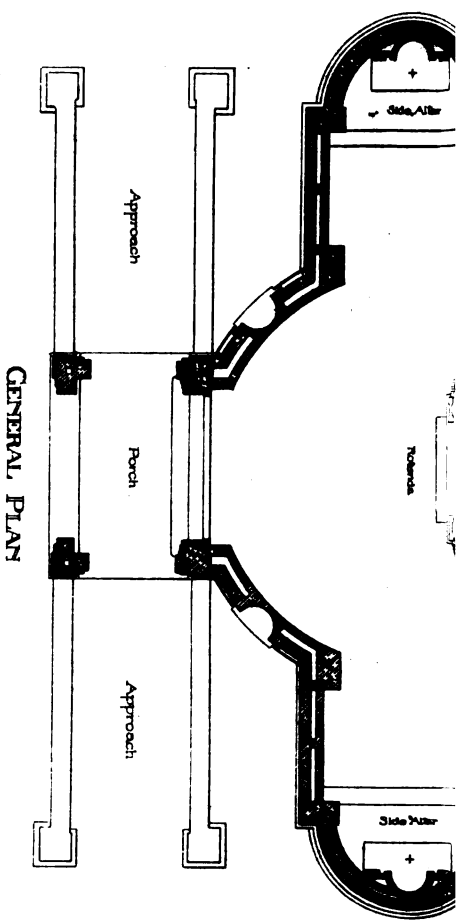
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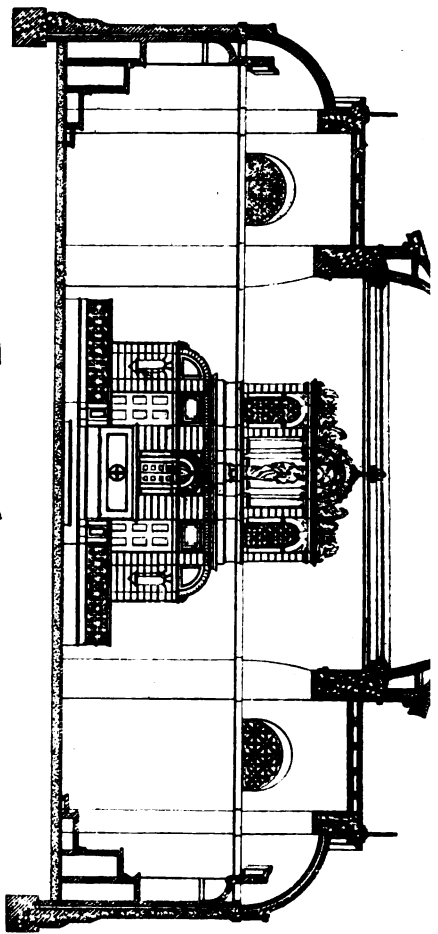
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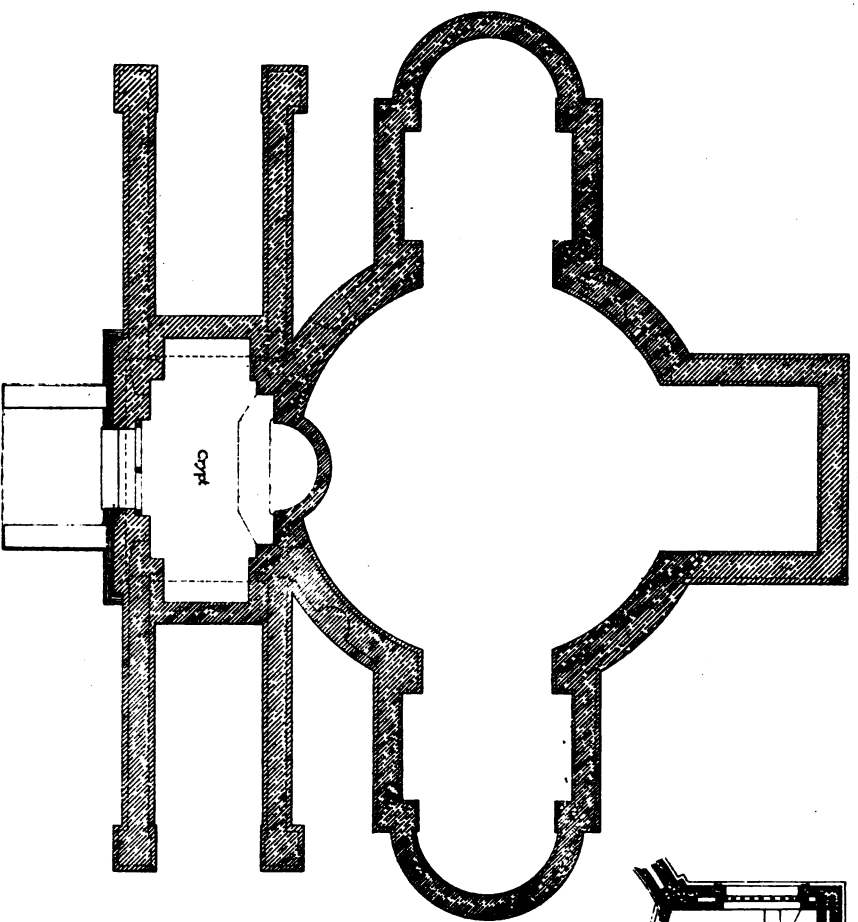
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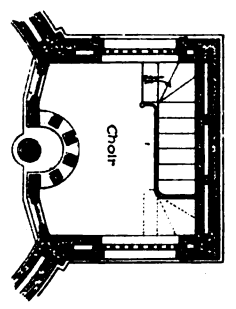
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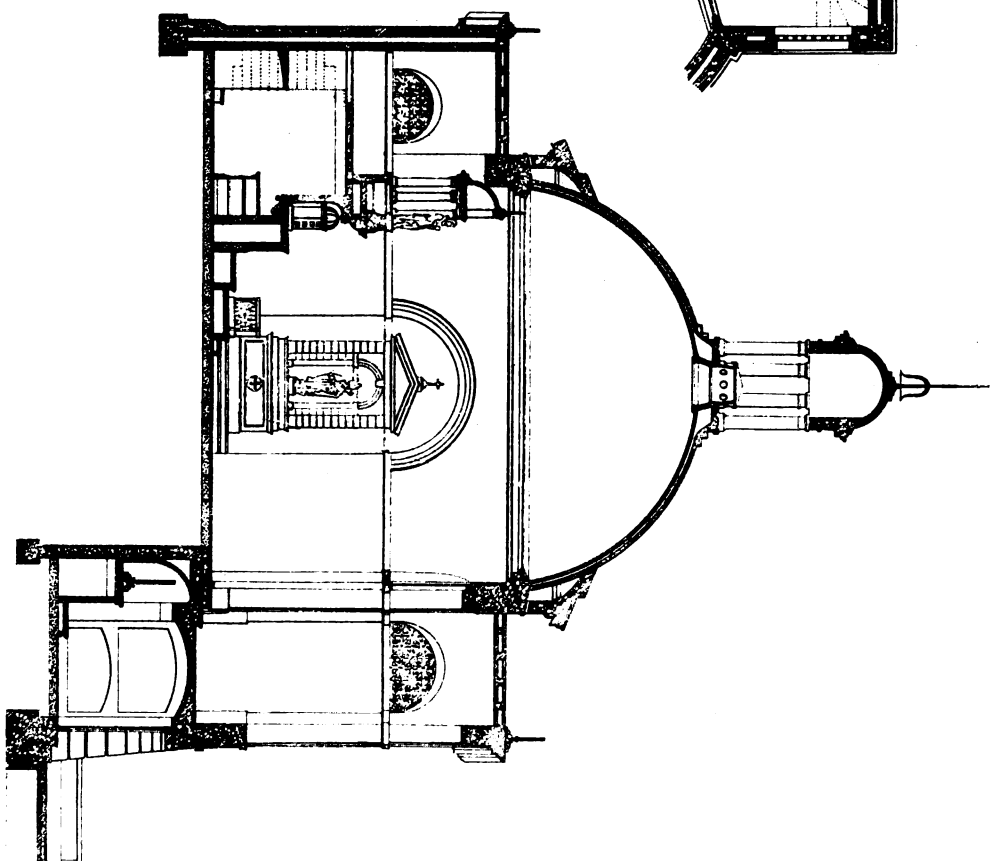
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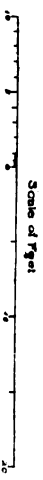
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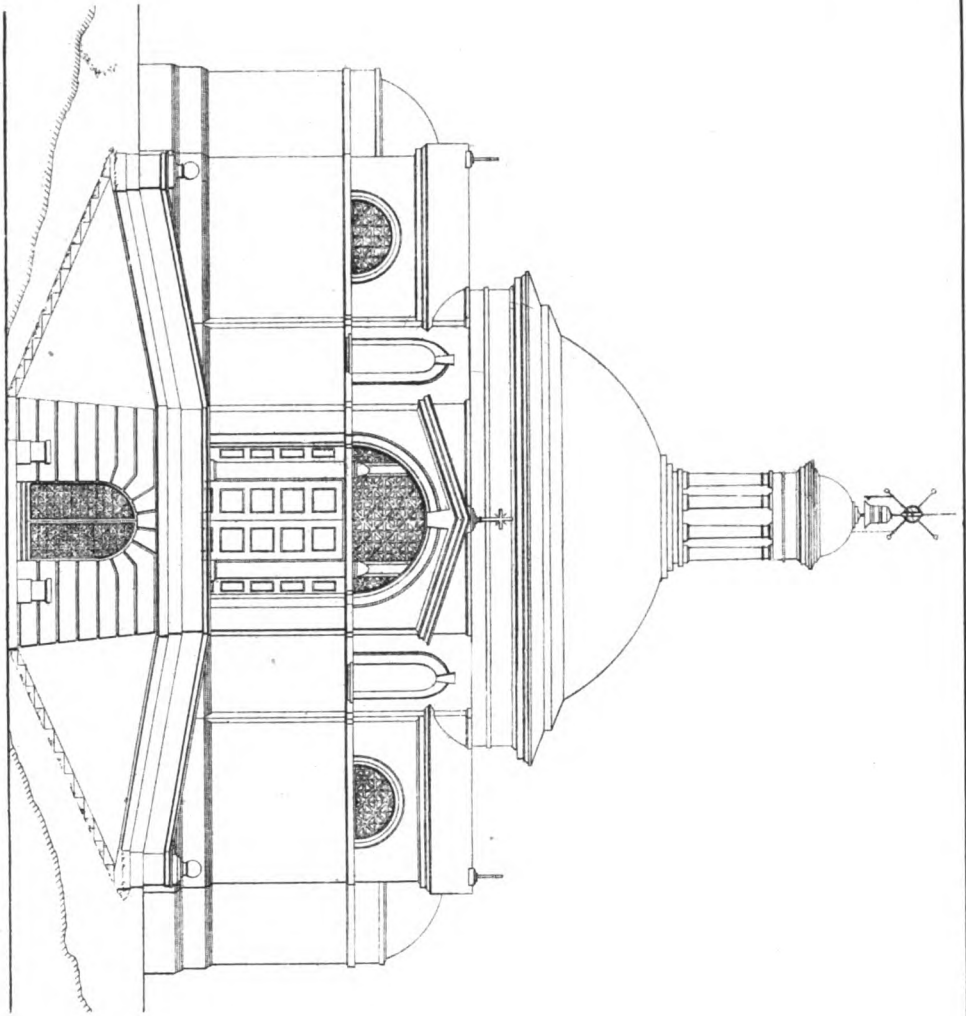
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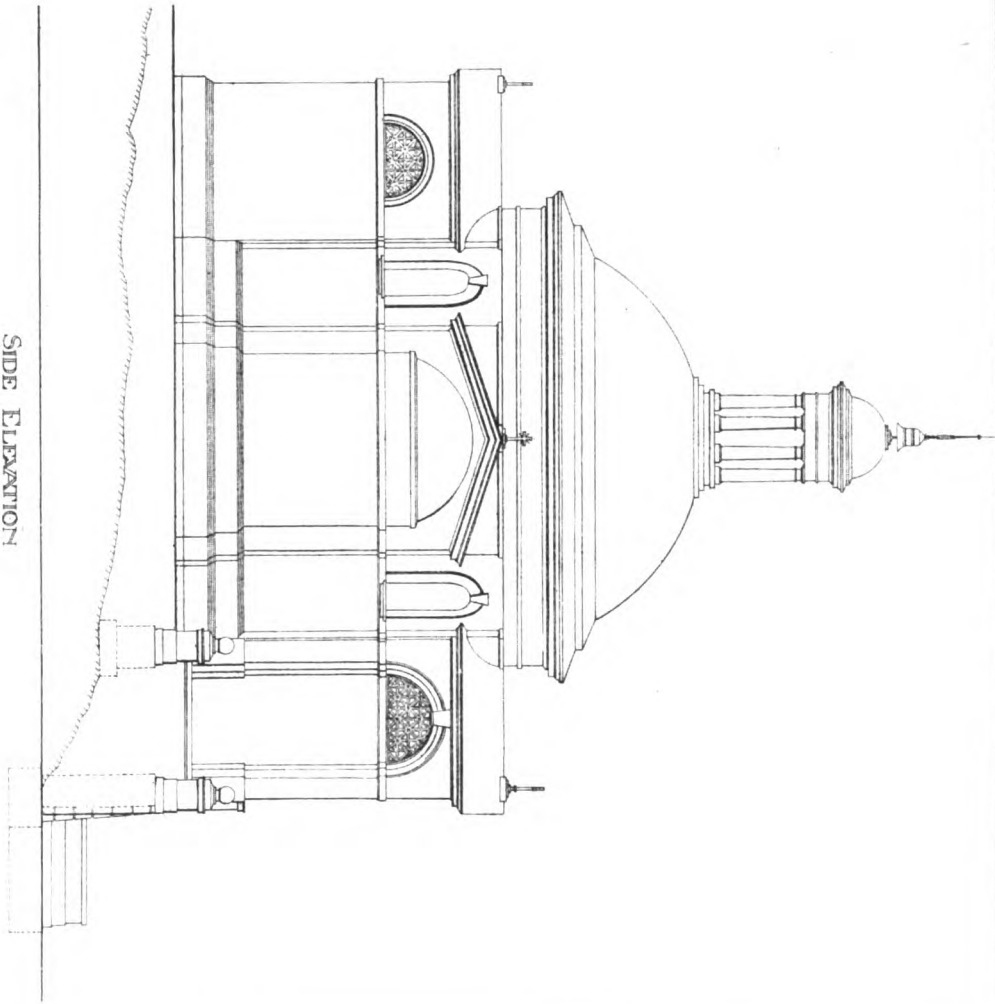
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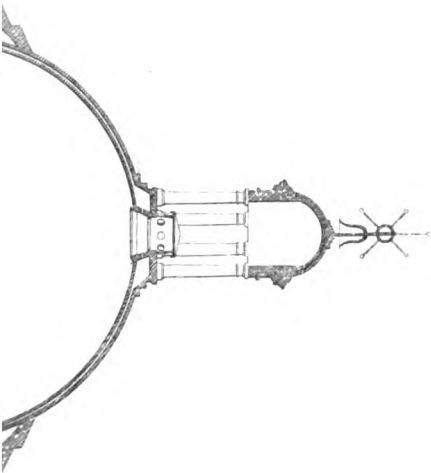
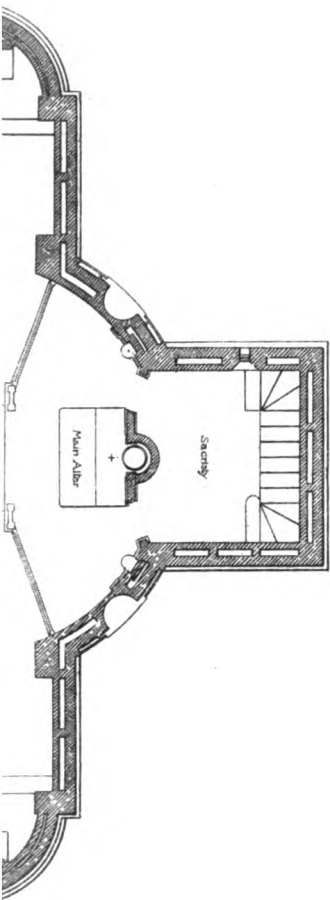
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FRONT ELEVATION



SIDE ELEVATION



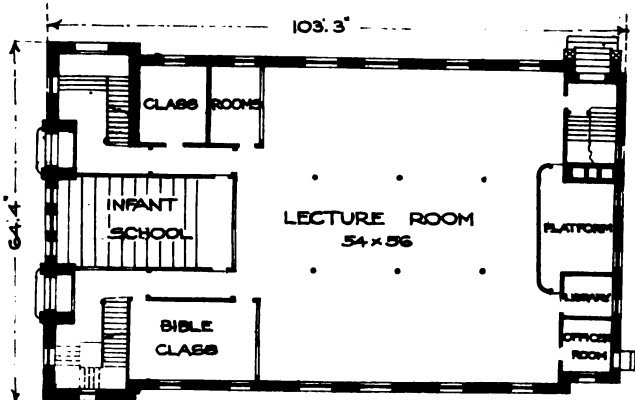
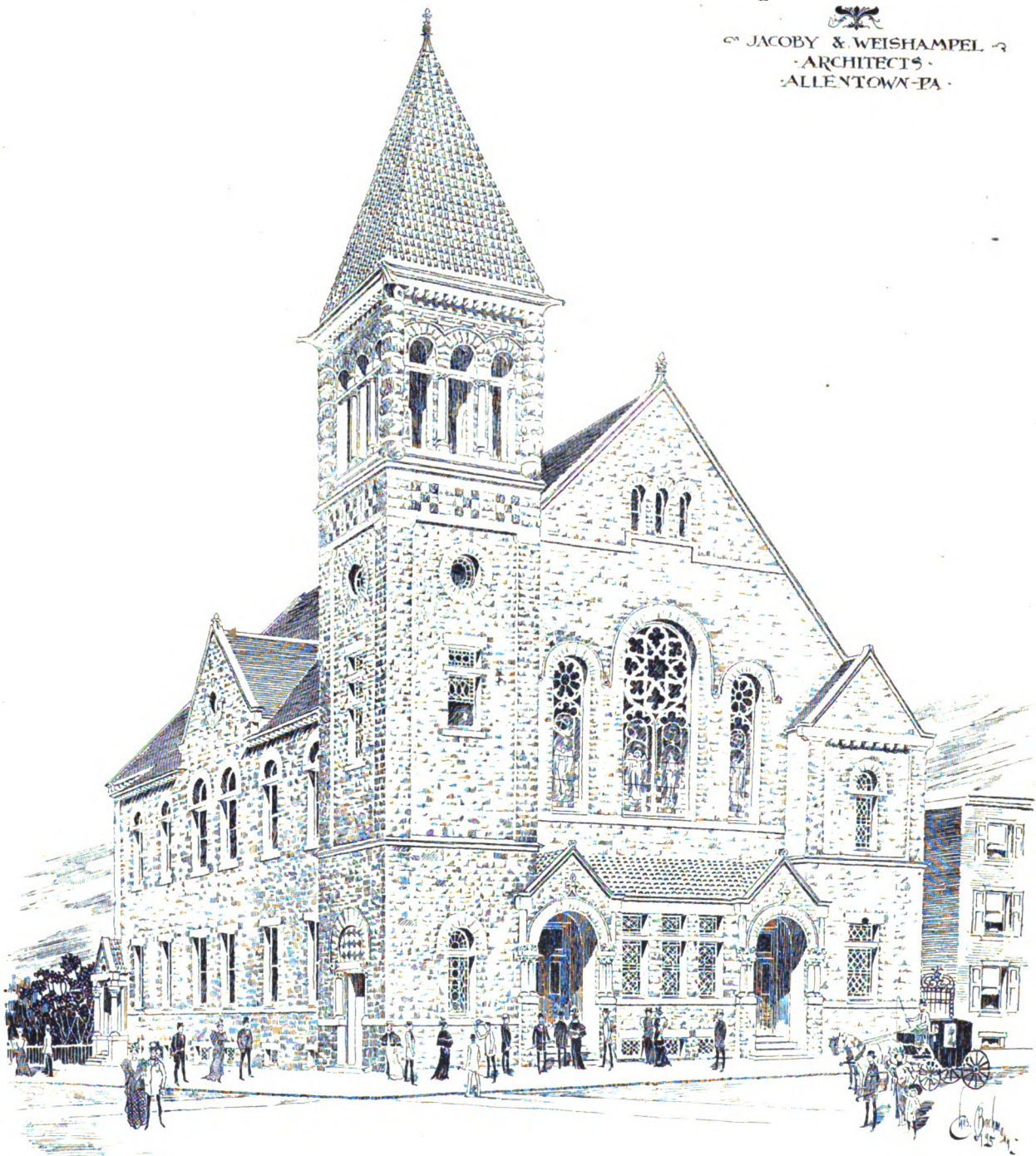




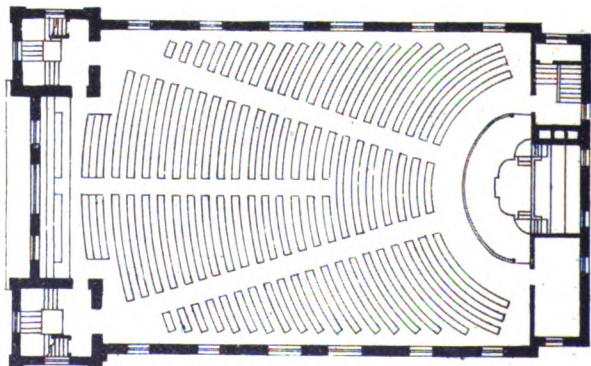
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FORTY-THIRD STREET.  
S. M. E. CHURCH.  
PHILADELPHIA.

JACOBY & WEISHAMPEL  
ARCHITECTS  
ALLENTOWN, PA.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

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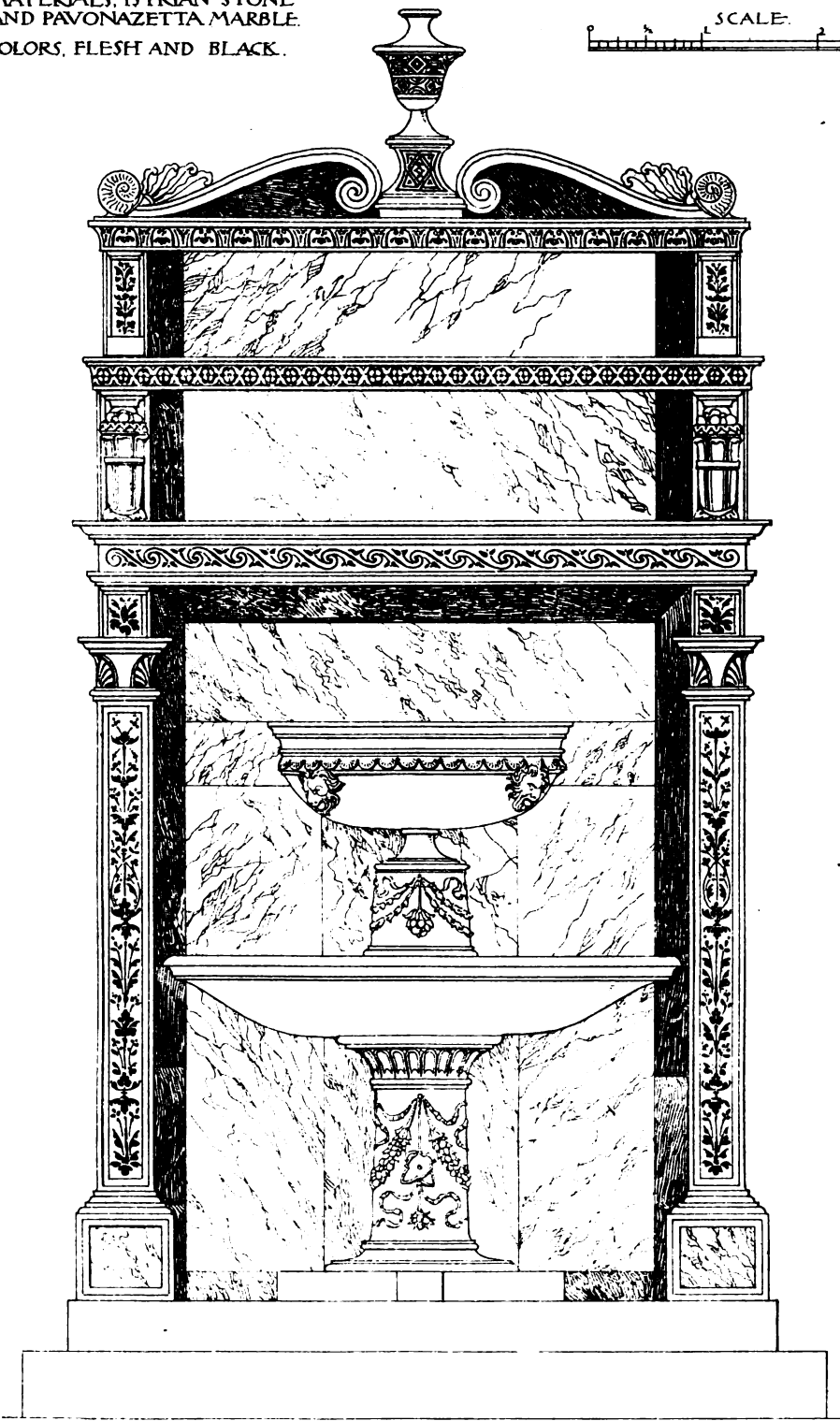


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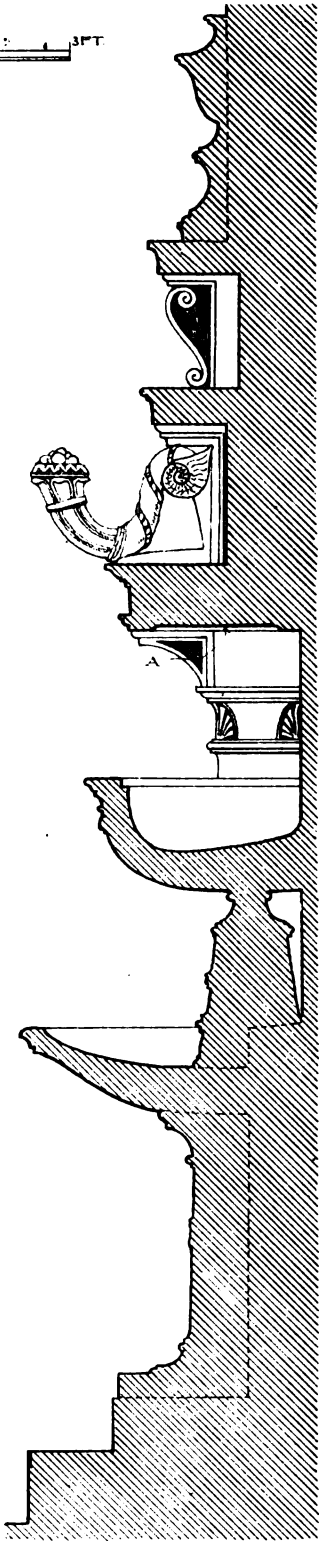
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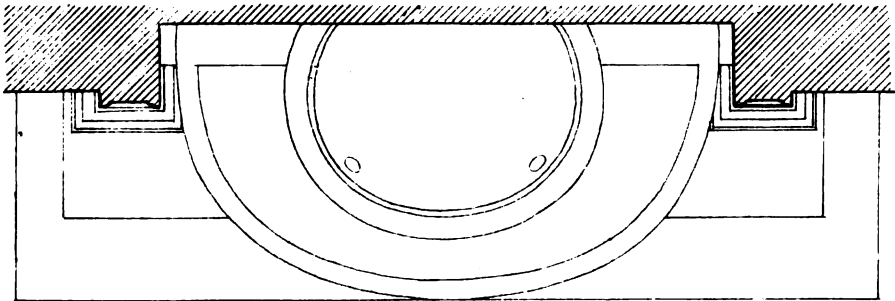
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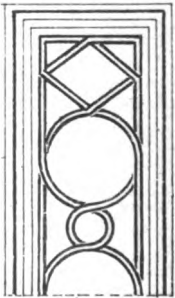
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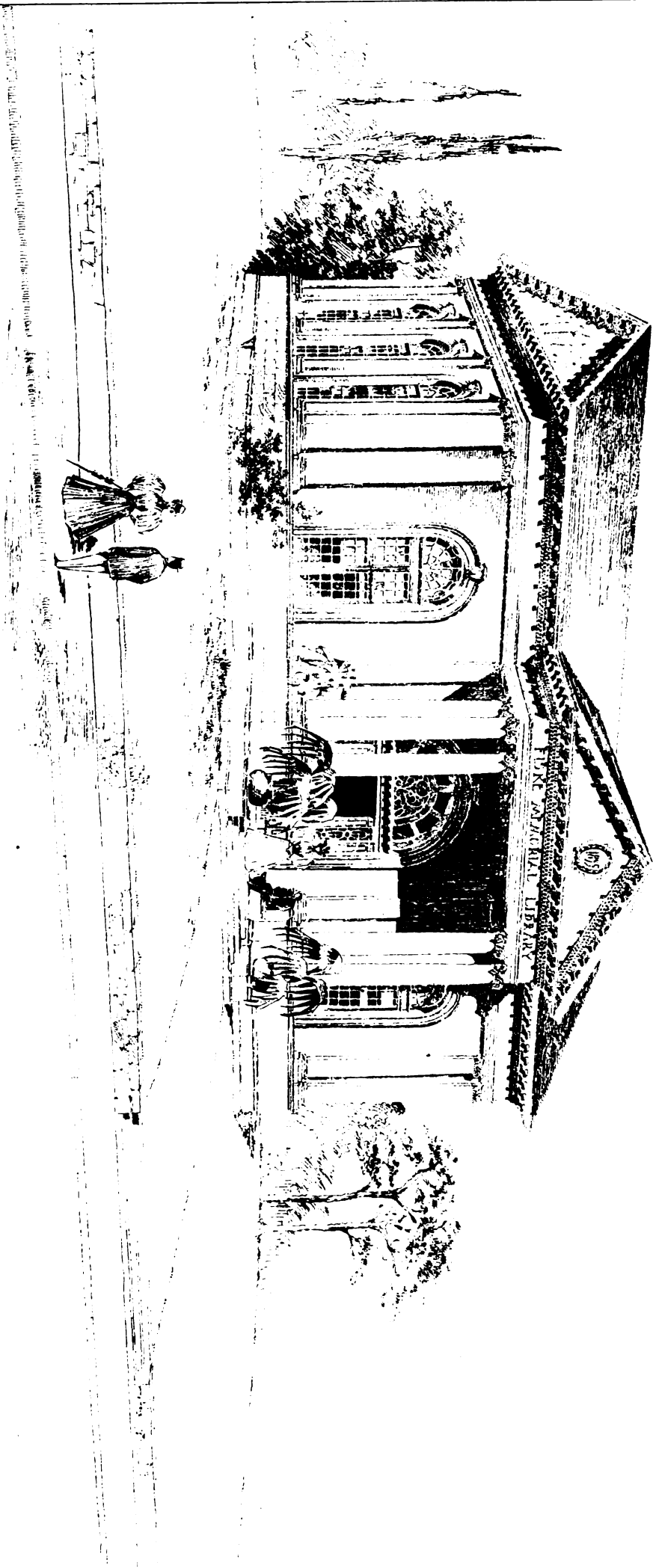


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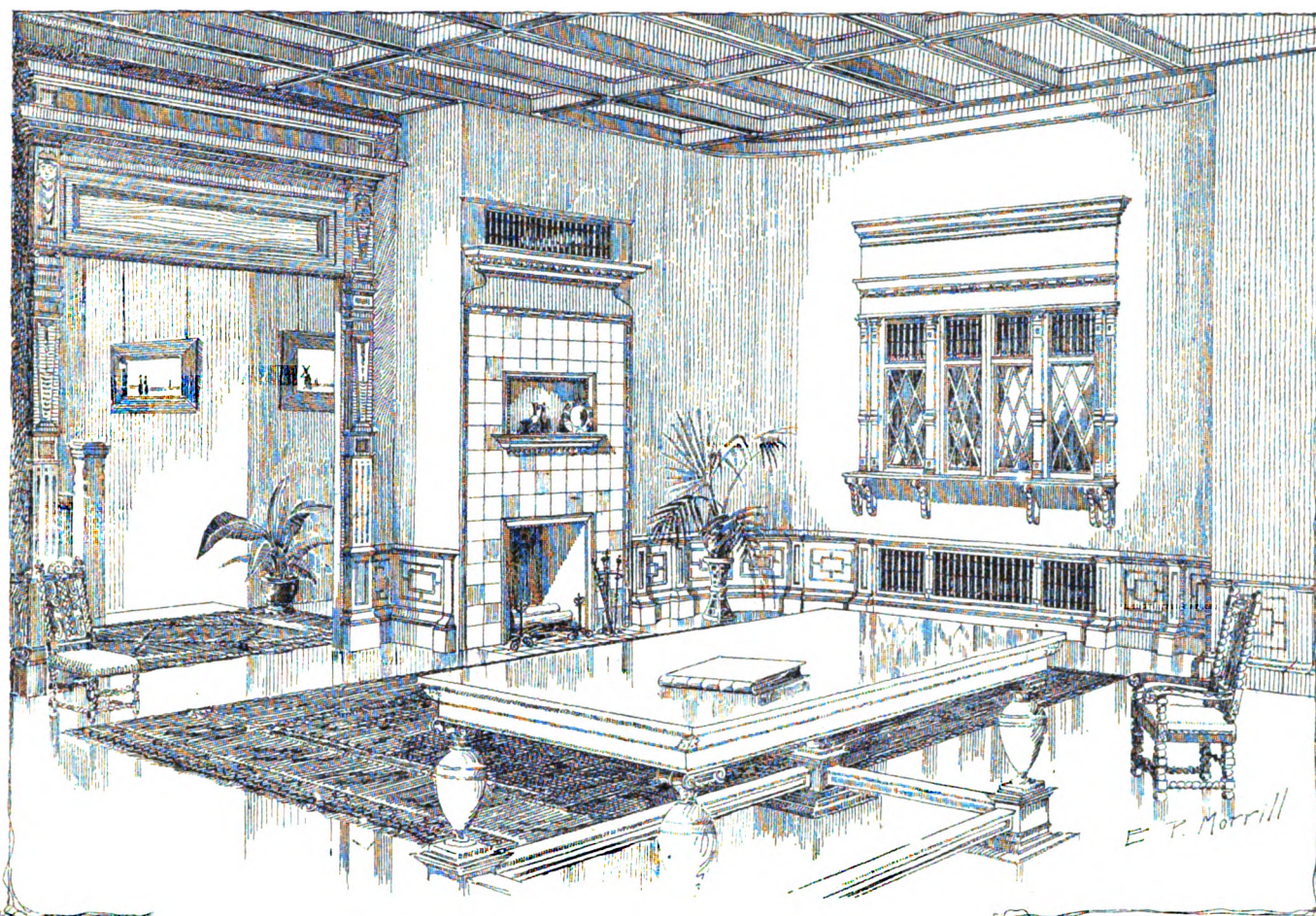
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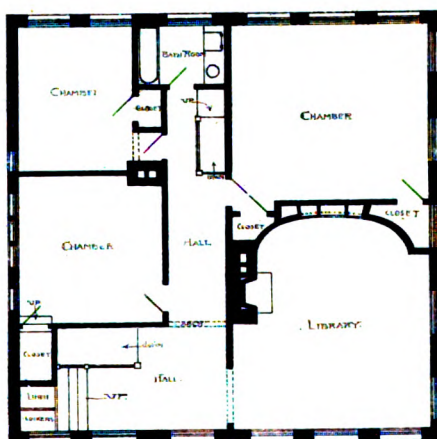


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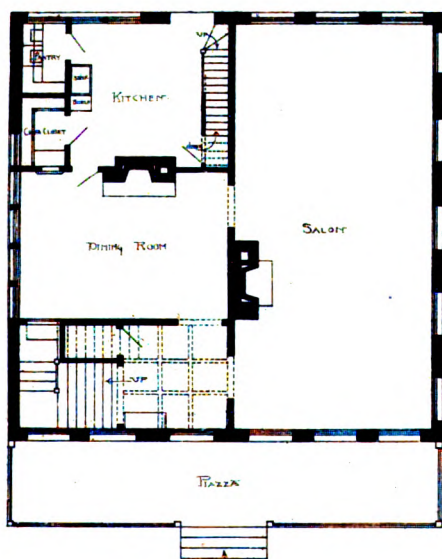


HOUSE OF  
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BROOKLINE, MASS.

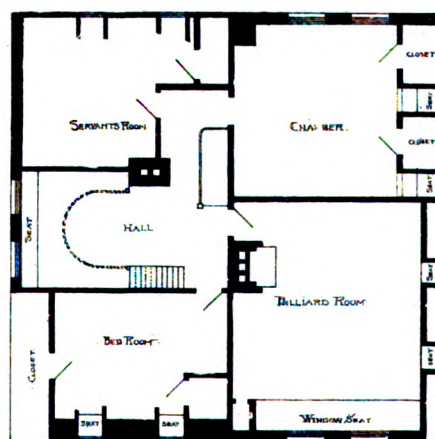
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palaces with long extended fronts, with centres and wings; but not one in a hundred who walked down it ever noticed these. With regard to formal gardens, there was a tendency to design geometrical forms, alleys and vistas, without due reference to the effect of the scale. It seemed to him that they should not be too big, or you would lose sight of that symmetrical arrangement which it was intended to express. With regard to the extravagant designs seen in some old gardens—clipping of hedges and so on, though they were sometimes quaint and picturesque, they did not want to revive these; but every one must admit the beauty of a well-clipped hedge of yew, holly, or box. Those who remembered the beautiful exhibition of Mr. Elgood's, last summer, would recall the lovely gardens, chiefly in Northamptonshire, at Rockingham, Bewick and some other houses, where everything was enclosed in hedges of yew or box, clipped into walls and alleys with the most charming effect. Probably Mr. Statham would not object to that. It seemed to him somewhat parallel to the case of the treatment of foliage in decoration and architecture, as they had to train foliage in capitals and friezes into conventional forms, and stiffen them to suit them to the place they were to occupy, so in a garden they might fairly cut and trim nature into something of a formal shape very different from that which pleased one in the wildness of the wood.

The vote of thanks having been carried unanimously,

MR. THOMAS, in reply, said he had referred to single trees rather as a necessity for marking the points in a complicated design, and the reason why they should be clipped was simply that the architecture did not grow, and the tree did; and unless clipped, it would grow out of scale with the architecture. For instance, take the two fine cedars seen over the top of the wall in the forecourt in one of the illustrations; they were planted quite small, one on either side of the central steps, but now they were grown to huge trees, so that from the bottom of the garden you could not see the house at all. They ought to have been cut down and replanted after about forty years. He had been a little loath to include Mr. Repton in the list he gave, but he thought the late Mr. Sedding, in his book, said rather too much about him; and a fashion had been set of overlauding Repton. He had his folio book, and there was a great deal in it which anybody of taste and knowledge at the present day would be ashamed to publish. He did not think it was altogether an excuse to say that his faults were the fault of his time; at any rate, it was no excuse for the time if it was for the man. As to pleaching and its meaning, he could not altogether agree with Mr. Statham, and he should be very much surprised to find that Mr. Blomfield was convinced that pleaching was not clipping, but interweaving of boughs. The book was the result of a series of talks between Mr. Blomfield and himself, and they went to some trouble to look up the actual derivation of the word. They found that to "plash" was to interweave, and plashing and pleaching were not to be confused. Any gardener, if you asked him for a pair of pleachers, would not give something to intertwine boughs but something to clip with. Ascovy Hall was mentioned in a book by Miss Tyssen Amherst, which had recently come out published by Quaritch, and contained views of it. Sutton Place was described by Harrison, and the garden was illustrated. With regard to scale, he believed the only thing was to measure the old work, which, unfortunately, did not exist in these matters as it did in architecture, because they were dealing with things which grew up and disappeared. Failing that, the only way was to design and experiment. It was a thing in which they had vast experience in the old days; and he long ago came to the conclusion that out of doors all measurements were paced, and never measured by rule. It was his experience that, if you paced an old avenue, the widths would fall into fives or tens of paces. At Windsor, for instance, they fell into tens. This rule held equally on the Continent.



INCREASING THE LIMIT OF HEIGHT.—ASSISTANT ARCHITECT FOR THE GOVERNMENT BUILDING.—ADJUSTING SETTLEMENT IN A CASE OF ALTERATION.—THE MOSAIC WORK AT THE PUBLIC LIBRARY.—AN EXHIBITION OF TAPESTRIES.—THE DORÉ PICTURES.—THE Ladies Home Journal DRAWINGS.—THE CUT-STONE STRIKE.

**L**AST month, in the letter from the Garden City, mention was made of the strong feeling against the building ordinance which limited the height of our high structures to one hundred and thirty feet. While the letter was still in the hands of the publishers, the wished-for amendment came. It was pushed through before the faces of our city fathers with more quickness and dispatch than is usual in such matters; the Mayor, approving of the amendment, disregarded a motion to place it in the hands of a committee, which would have given the affair the usual slow gait common to such matters. Fortunately, no such delay was experienced, and by a vote of fifty-six to eleven the ordinance was amended, by changing the limit of the height from a hundred and thirty to one hundred

and fifty-five feet. However, a clause of the old ordinance which is still in force has surprised some, since it, in some cases, puts a limitation to the new amendment. It is that the height shall not exceed three times the width of the building. Of course, in the case of narrow lots this necessitates a comparatively low building, irrespective of any new building ordinance.

As a good many buildings are being erected substantially enough for twelve stories, while it was only possible for them to carry ten of ordinary height under their roof, the hoped-for change in the law was most pleasing to many architects as well as owners, and that the change not only came but came quickly made it doubly welcome.

A matter which has been more or less discussed in the papers away from here, probably less, but which is of especial interest to Chicago and Chicago architects, is the passing in both Houses of the special appropriation of \$25,000 for an assistant Chicago architect for the Post-office Building. How much of this \$25,000 it would be necessary for this assistant of the Supervising Architect to spend in draughtsmen's wages, etc., is not mentioned, and most decidedly if it is expected that much expense shall be borne by the assistant architect, this is a most inadequate appropriation for so large a building and one which would prove but small temptation to a first-class architect. This idea would seem to be borne out exactly by the rumor which reports that Mr. Coolidge, of Shepley, Rutan & Coolidge, who has been offered the appointment, is at present in Washington discussing this very point with Secretary Carlisle. According to these reports, the position would not be unwelcome if it did not necessitate doing almost five-per-cent worth of work for about one-half of one per cent.

A rather curious building feat is being performed in a structure which is being remodelled on Quincy Street, just east of the Great Northern Hotel. The change in the moral character of the building, if one may so express one's self, will be quite as curious as the change in construction. Heretofore the place has borne the reputation of being one of the worst gambling resorts of the city, but after its transformation it will appear as a large bath-house where all dirt can be washed away. Ten years ago the building, which in height is a five-story-and-a-half basement, was constructed. Through two of the stories a bay-window extends, which, after the changes, will be carried through the entire five. After the Great Northern Theatre annex was decided upon, there seemed to be an opportunity to change the character of the place. It was accordingly leased as a bath-house and although it will not be directly connected with the Great Northern, there will be communication between the buildings in the basement. An agreement was made between the owners of the smaller building and the theatre-building company that the west wall of the old building should be incorporated into the party-wall. Here, of course, at once arose the question of the settlement of the new building. Here, on a soil such as we have in Chicago, an allowance of nine inches is made for settlement. This allowance has already been made between the hotel proper and its new annex, as is shown in the variation of the ornamental sill-courses. A similar case was to be seen in the two portions of the Monadnock Building, where the stories of the new and old sections seemed to be quite on different levels at first, but have since settled down to the same grade. In the hotel and its annex the settlement would be effected without any trouble, as the two structures are on different foundations and the old wall would stay stationary while the new one was settling itself.

At the east of the new building, however, where the smaller, older building was to be incorporated into the large new one, matters were not so simple. On one side of the bath-house, the joists would remain in the old wall at their accustomed level, while on the other, which had been incorporated into the party-wall, there would be a settlement of nine inches. This unequal settlement for the smaller building, with the added weight of marble lining and wainscoting, would quickly reduce the place to a wreck. Consequently, the only way out of the difficulty seemed to be, to build up a temporary supplementary wall for the smaller structure, known as the Lehman Building, which can be removed after the Theatre Building has entirely settled. This is, consequently, being done, the floors being held up on timbers and jack-screws during the process.

Things continue quiet in the architects' offices, and some of the plans which at the beginning of the year seemed about to materialize have not yet shown themselves up as absolute certainties.

One of the most important down-town buildings just designed is now known as the Silversmith Building, for Benjamin Allen, and the Gorham Manufacturing Company. One of our papers in speaking of it says, "The front will be of terra-cotta and pressed-brick, broken by many windows and representative of a plain but stately architectural style." This certainly is as kind a criticism as could be made on it, judging from the drawing, for certainly no building of its size could be erected which would have less architectural features or pretensions. An oblong box pierced by so many holes of equal size would seem to be the *beau ideal* of its architect, if this structure in any way realizes his ideal. The entrances are absolutely without any impressive architectural features, the windows without grouping and the two lower stories, where some well-studied characteristics usually appear, if they are found anywhere on the building, in this case only equal the eight accompanying stories in their commonplace character, and yet from the office of this architect and his former partner some of the best work found in our large down-town buildings has been produced.

The private view recently given in New York of the glass-mosaics and inlays destined for the Public Library in Chicago, brings out the fact that this is the most extensive work in glass-mosaics undertaken since the Cathedral of Monreale in Sicily, in the twelfth century. The actual mosaics and inlays, judging from the exhibition of the models given in Chicago last fall, will be a most beautiful feature of the new building, and until we see the actual decoration of the other rooms, we will hope that the idea received from the models is an exaggerated one of its tawdriness and flashiness.

In the early part of this month a very interesting exhibition was given at the Art Institute of the collection of tapestries owned by Mr. Charles F. Foulke, of Washington. This exhibition was made possible through the efforts of the Society of Antiquarians, an association of ladies who have organized for the purpose of making rare collections in textiles, jewelry, laces and kindred applied arts, and who, having associated themselves with the Art Institute, do much to bring to its galleries at least one very interesting loan collection annually, while a large suite of rooms is given over as a permanent thing to their fast-growing collection. This recent Exhibition of Tapestries included the Barberini tapestries made under the direction of Pope Urban — brother of the well-known "King Robert of Sicily." This set, from the hands of Jacques de la Riviere and Jean François Romanelli, have for their subjects six scenes from the "Life of Constantine the Great." Five bear the signature of Riviere, while the Constantinian monogram in gold rests in the top border. The subjects are, "Constantine in a Gladiatorial Contest," "Constantine contemplating the Flaming Cross in the Sky," "Constantine destroying Idols," "Constantine burning the Creed of the Aryans at Nicæa" and "The Construction of Constantinople."

A series of five with "Judith and Holofernes" for their subject come from the Brabant School and date from the latter part of the seventeenth century. They are signed by E. Leyniers and H. Ryman, the two most celebrated names among the Flemish master-weavers. To many the most beautiful series of the collection was that known as the "Diana" series. These, though coming from the Brussels looms, date back almost a century earlier than the "Judith" series, and bear the monograms of Jacques Seubles and Jean Raes.

The present drawing card of the Institute is the great Doré pictures. It has been most curious and interesting to see what does most appeal in art to the average man and woman and there can be no question that these huge creations mean more to them than anything heretofore exhibited at the Institute. The place has been packed on free days, one Wednesday the number mounting up to seven thousand five hundred, while on Sunday it was over six thousand. People of education and refinement, along with the German mechanic and Italian laborer, have flocked to see these paintings, and one is in doubt whether it is the huge dimensions or the scriptural subjects of most of them which produces the charm. One can understand how "Christ leaving the Pretorium" or the "Death of the First-born" might attract many, and — well, yes, we can understand too how the Baden Baden gambling table with its crowd of badly drawn figures and lurid atmosphere would not be without charm for many. Be it as it may, it's a good thing to get a community interested in art of any kind, and to get the public in general in the habit of going to the Art Institute and growing to feel a certain ownership.

Chicago goes into things with a rush. Who knows that we may not be on the verge of a great art revival, when children and adults, rich and poor, the educated and the ignorant will look upon art as something to be wished for, and also obtainable. A curious example of a rush at an art exhibition was that seen at the exhibit made by the *Ladies Home Journal* of the original studies for its illustrations. Certainly, this especial display was entirely different from the one being made several blocks north at the Institute. It was held in the banquet-hall of the Auditorium Hotel, and was accompanied by a Hungarian band playing like mad and was very prettily set in floral surroundings, and — was free. Hardly any one is proof against the temptation of getting something for nothing, and as a result of this, or perhaps, we might give the community the benefit of the doubt, of a sudden and heaven-born desire to take in everything artistic that there is to be taken in, everybody went to the exhibition some time, waiting in line from the Congress Street entrance on to Wabash Avenue. And such a motly visitation never jostled against one another in the cars of the elevators before.

Enthusiastic young art students crowded side by side with an old farmer and his wife, in for the day from the Illinois farm, or the "smart" up-to-date woman against the little behind-the-times dame fresh from her nursery and household cares. The exhibition itself was not at all unusual, for there is constantly coming to Chicago much of a similar character, but the way it was received was indeed a surprise. As is usual in work for reproduction, no special medium was used, the range being from pen-and-ink to oil. The exhibition was made up of drawings by Reginald B. Birch, B. West Clinedinst, Wilson de Meza, Arthur B. Frost, Charles Dana Gibson, W. Hamilton Gibson, Kate Greenaway, W. St. John Harper, E. W. Kemble, Albert Lynch, Eric Pape, Howard Pyle, W. A. Rogers, W. T. Smedley, Alice Barber Stephens, Frank O. Small, Henry Sandham, W. Granville Smith, W. L. Taylor, Thure de Thulstrup, Abby E. Underwood, Irving R. Wiles, the compositions being over two hundred in number. W. L. Taylor's strong, artistic work was well worth braving the crowd to see, Charles Dana Gibson's familiar short-limbed females are always pleasant to meet, William Hamilton Gib-

son had some of his usual charming things, and Alice Barber Stephens had much that was excellent in her later work.

In view of what looks like unprecedented enthusiasm and interest in matters artistic, the managers of the Art Institute have decided to have the galleries open every Thursday and Friday evenings, until the latter part of March. The present attraction in the galleries is the collection of paintings of the modern Swedish School. Mr. Anders L. Zorn, the Swedish artist who first won popularity in this part of the world during the World's Fair season, has charge of the bringing together of the collection. The Chicago Art Institute, the St. Louis Museum of Fine Arts, the Cincinnati Museum, the Philadelphia Academy of Fine Arts, the Boston Art Club and the Pratt Institute of Brooklyn are the institutions which have been instrumental in bringing the collection to America. The artists represented are Acke Anderson, Richard Bergh, Oscar Bjorck, Eva Bonnier, Baron Gustaf Cederstrom, Per Ekstrom, Wilhelm de Gegefelt, August Hagborg, Eugene Jansson, John Kindborg, Nils Kreuger, Carl Larsson, Bruno Liljefors, Karl Nordstrom, Hanna Pauli, Charles F. von Saltza, Robert Thegerstrom, Alf. Wallander and Anders L. Zorn.

From time to time mention has been made in these letters of the activity seen in marine architecture in this part of the world: now the various yacht clubs of this section have become filled with a desire for international races on the Great Lakes, and as a result, a ship-building firm at Racine, Wis., has taken up the matter of yacht-building, and if reports are true will make the Eastern firms look well to their laurels. A new boat is being designed, destined, it is hoped among yachtsmen, to win the cup next summer in the approaching contest. Unlike most of the racing yachts built for this lake district, the crew and owners can be accommodated on board for longer than the usual afternoon and day. The plan is, of course, compact, but convenient. The length of the water-line is about forty-five feet, length of deck sixty-five, and beam twelve feet. The saloon is seven feet by twelve wide and is furnished with lounges which can serve as beds at night. Above each of these is a birth, which will make the sleeping accommodations of the cabin number up to four. Forward of the saloon will be the owner's stateroom, while access from it on the port side will be to the toilet-room. The passage between these two will lead to the galley, equipped with range, ice-box and cooling-room. Here, also, will be store-room for provisions. Immediately forward of the galley will be the crew's quarters, with accommodations for five men. The cost of the yacht will be about ten thousand dollars, and the designs are made by one of the best designers in this section of the country. It is somewhat of a shock to those of us who have seen crafts on the ways of the good old-fashioned "down East" ship-yards to learn that the yacht will not only be built under cover, but also that the frames will be placed upside down on the floor of the shop, the keel being in the air, while the tops of the frames will be fastened by angle-irons to the floor of the building. In this position the planking is easily adjusted, and after it has been planked and braced it is turned over into the ordinary position and the rest of the work proceeds in the usual manner.

In the latter part of January a strike was inaugurated among the stone cutters. A little printed card was sent out by the Union, demanding of the cut-stone contractors "that only members of their Union shall be allowed to operate the stone-planing machines, that these machines must not be operated more than eight hours per day, that the operators of such machines must receive four dollars per day (eight hours)." Following up this the Cut-stone Contractors Association sent a communication to the different architects for their careful consideration — a statement of their side of the question. The statement was substantially as follows:

"That the general public may thoroughly understand the principle involved in the unwarranted strike inaugurated by the leaders of the Journeymen Stone-Cutters' Association, of Chicago, against their employers, Monday, January 6, 1896, the Stone-Cutters' Contractors Association operating machinery hereby make the following statement.

"We claim the undeniable right to operate our machinery, saws, rubbing-beds, planers and lathes as many hours per day as we can secure work for them to do and employ men to operate them without dictation from or under direction of the Journeymen's Association, but operate them on the same business principles as all other manufacturing establishments in this city.

"This is an inherent right which all men are bound to respect. . . .

"The cut-stone contractors are not the cause of the great business depression that has settled upon the country since 1893, nor are they the cause of the present unsettled and deplorable financial conditions which make profits impossible in nearly all industrial undertakings and have cut down the amounts expended for the construction of buildings to almost one-half of what it was in prosperous years before 1893.

"These causes have forced down standard values from 20 to 30 per cent, but the wage scale of the building trades stands just the same as in prosperous years, and consequently the contractors are the only ones who have suffered.

"The planing of stone has been a vocation in Chicago since 1868, when planers were first introduced here, the output being chiefly large flags and sidewalk stone.



"During the years 1874 to 1880 several large buildings were almost entirely cut by planers.

"The development of the Bedford quarries at Bedford, Ind., in 1877, established an immense production of raw material yearly, which added a large force of planers to cut-stone production and in all the largest Eastern cities planers adapted to cut-stone work were introduced, and since 1890 they have been gradually introduced in most of the stone-yards in Chicago.

"The planing machines have always been operated by men from ordinary ranks of labor and only a short time is required by an ingenious man to become an expert operative, as the machines and tools do the work and no great skill is necessary.

"The large output of planed stone since the depression of 1893 has necessarily reduced the demand for men in proportion, but this has been counterbalanced by the larger volume of work secured in competition against terra-cotta, pressed brick, artificial stone and metal work, which could not have been done without the aid of planers. The same result in the old plan could only have been secured by a corresponding reduction in the price of skilled labor of from 30 to 40 per cent.

"The Journeymen's Union now proposes to reverse this condition of production of planed work by forcing contractors by threats, insinuations and future persecution, the nature of which we fully understand, to raise the price of cut-stone work by placing planers at their command and decrease the volume of work, the alternative of which would be less pay.

"In thus putting our case before the general public and building community, we can assure them that we are cognizant of the best interests of the cut-stone business, have kept pace with the march of time in industrial progress, and have introduced labor-saving machinery as universally done all over the world, and thereby reduced the cost of production, which enables us to furnish cut-stone fronts as cheap as terra-cotta, pressed brick, artificial stone and metal.

THE CUT-STONE CONTRACTORS' ASSOCIATION."

Then follow the names of over twenty of the chief contractors. After this, at a second meeting of the Union, a second communication was sent out confirming the principles of the strike as first laid down and ending with the resolution that

"... any person, whether a member of a firm or of this body, who acts as foreman in giving out lines of work, breaking up, or in any way aids in running machinery against the rules of this body, shall be brought before this body and held subject to its decision, to be enforced at any time in the future, when such person shall be within the jurisdiction of the Association or come under its control."

Thus was the merry war begun, with apparently no immediate prospect of either side conceding much.

A personal item of interest is the severing by Mr. D. Adler of his connection with a commercial house where he has been engaged for the past few months, as referred to in these letters. Rumor has it that he will, henceforth, act largely as consulting architect and expert adviser (just as he is now doing in the case of the great building to be erected at St. Louis for the Republican Convention next June). But either as a practising or a consulting architect, certain it is that his return to the fold will be heartily welcomed by the profession of this city.

#### PROFESSOR HERKOMER'S NEW BLACK-AND-WHITE ART.

AT the Fine-Art Society in New Bond Street, Professor Herkomer, R. A., lately gave a demonstration and explanation of his "New Black-and-White Art."

The Professor said:—"The black-and-white art, which I now present to painter and public, is new from nearly all points-of-view. It is patented under the definition of 'an improvement in artistic printing-surfaces,' and not the least part of the novelty lies in the fact that this 'printing-surface' is the result of a peculiar treatment of an artist's painted handiwork. Thus, probably for the first time, the painter has it in his power to do black-and-white work, diffusible by the printing-press, without departing from his accustomed methods of work, for I give him 'paint' to manipulate with the 'brush.' He has no new technicalities to acquire, such as are needed for the production of various forms of engraving—technicalities that have hindered many an artist from taking to 'plate work.'

"First, on the polished surface of a copper plate, which is coated with silver, the artist paints his picture with a thick black pigment resembling printer's ink. In the production of this painting he uses brushes, stumps, his finger-tip, or anything, in fact, that will enable him to get the desired effect. So far, it is a positive process, requiring therefore, no reversion of the subject on the plate—an inestimable boon to the artist. Although the further development of the process requires that the ink shall remain wet, the artist need in no way hurry himself, as the ink I have invented for this method of work practically never dries. On examination of the painted plate it will be seen that the ink is on the surface in different degrees of thickness. In this variety of depth in the ink lies the first vital point of the invention. The artist need in no way think of this necessary condition; it comes without conscious effort in the making of his tones and gradations. This painted surface, with the ink still wet, or soft, is now dusted thickly over with a particular powder, until neither the black paint nor the brighter parts

of the plate are visible. A soft, broad camel's-hair brush has to be used to brush the surface gently and in all directions, until the superfluous powder comes off. We have now, at this stage, a painted picture dusted with a powder, which granulates the painted touches into perfect proportion to their depth of tone, without, however, in any way altering their autographic character. The ink used is composed of German black and a mineral oil, and the powder is composed of an inert and an active ingredient—the one to give granulation and the other conductivity. We now enter the third stage and take of this granulated surface a 'metallic mould,' or, in other words, an electrotpe. Such is the conductivity of this surface that (all things being right) in ten minutes a bluish of copper spreads over the whole surface when subjected to the electric bath. This settles in and repeats the most minute crevices and interstices. The plate is left in the bath until the copper deposit is as thick as an ordinary printing plate, which may mean anything from six to ten days, according to the thickness required. By filing the edges we are enabled to separate the deposited from the original painted plate, and in the deposited plate we get an exact negative or mould of the painted and powdered surface, from which, by the ordinary methods of copper-plate printing, a perfect reproduction of the original painting is obtained.

"My method is indisputably more suited to the artist and the painter, than any laborious and difficult form of engraving, which he would have to learn as a separate and totally distinct branch of art. And in result nobody will deny that my method in its printed result looks like a form of engraving. If we touch the matter of speed, every form of engraving must be withdrawn from competition. I can do in my method as much in one day as occupied me six weeks in mezzotint work. I am, on the other hand, prepared to own that, although every gradation of tone and texture can be given, my method is not so suited to the interpretation of other men's work as mezzotint would be. Its very freedom seems to set itself against close imitation. It is this 'freedom' that points to original work as the mission of this new black-and-white art. To compare my method with any other tone art than mezzotint, such as aquatint, would hardly bring out any new facts. The result must be seen, examined, and judged on its own merits, as the method neither seeks to rival nor to supersede any form of engraving."

The lecture was listened to with much interest, and great admiration for the examples hung round the room was expressed by several of the artists and critics present.



#### AMERICAN INSTITUTE OF ARCHITECTS: DIRECTORS' MEETING.

AN adjourned meeting of the Board of Directors of the American Institute of Architects was held in New York, February 14, 1896, the President, Mr. George B. Post in the chair.

There were present, in addition to the President and Secretary, Messrs. Kendall, O'Rourke, Frederick, Stead, Briggs, Mason, Link, Day, Schweinfurth and Andrews of the Board, and Mr. Gibson, a former member of the Board.

The Secretary reported that Mr. Adler had returned to professional practice after a slight interval, and it was decided that his name should be continued on the rolls and that his membership be considered as not lapsed.

The Institute having received a request to appoint a member to a joint committee on Standard Rules for Electrical Construction and Operation, the President requested the Secretary to act in that capacity.

Since the last meeting of the Board, notice has been received of the deaths of Mr. A. Page Brown, of San Francisco, who died January 21st, from injuries received last October; of Mr. A. P. Cutting, of Worcester, Mass., who died February 6th from extreme nervous exhaustion at Los Angeles, Cal., where he had gone for his health, and of Rev. Wm. H. Furness, D. D., the oldest of the Honorary Members of the Institute.

The President reported that there had been no meeting of the committee appointed to prepare a bill for securing plans for the erection of the public buildings of the United States, and no active work done, except to ascertain the state of public opinion as to what can be done. A good deal of favorable opinion has been developed in Chicago and Philadelphia, and the present Committee on Public Buildings and Grounds is more favorable to a bill taking the work of designing public buildings out of the office of the Supervising Architect than was the committee of the last Congress. The Senate Committee is also considered to be more favorable to such a bill. A former self-constituted committee had raised some \$250 to meet necessary expenses of their enquiries, and the present committee wished instructions. It was found that there were two committees in existence, the committee appointed January 9, 1894, apropos of the Buffalo Federal Building, and that appointed January 4, 1895, to draft a bill to regulate the designing of Government buildings. After a full debate, Mr. Day offered the following resolutions, which were unanimously adopted:

*Resolved*, That the Chair appoint a committee of five, of which the President, Mr. George B. Post, shall be Chairman, with five alternates, to secure the passage of the Aldrich Bill, or such bill of similar import as shall commend itself to the committee.

*Resolved*, That the said committee be empowered to raise by voluntary subscriptions funds for the said purpose.

*Resolved*, That all previous committees appointed for similar purposes be discharged.

The Chair appointed as members of the committee, in addition to himself as Chairman, Messrs. Bruce Price, John M. Carrère, J. G. Hill, Alfred Stone, with E. H. Kendall, H. J. Hardenbergh, Robert Stead and R. S. Peabody as alternates.

The President reported the efforts of the Chapters in the State of New York to procure the passage of a law licensing architects, and the Secretary was requested to communicate with Mr. J. H. Pierce, of Elmira, and procure data on the subject and communicate it to the architectural journals.

The Secretary read a letter from the St. Louis Chapter, acknowledging the receipt of the vote of thanks passed by the St. Louis Chapter.

The Secretary read the following report from the Washington Chapter, with a request that action be taken thereon :

"The committee, appointed by the Washington Chapter of the American Institute of Architects to report on the advantage of Washington as a place for the headquarters of the American Institute of Architects, submit the following :

1. Washington City as the seat of the Government is the proper place for the headquarters of all National Associations.

2. The broadest field the American Institute of Architects has for producing good results lies in obtaining National Legislation in relation to art and construction.

The question of Government testing-stations, which was advocated some years ago by the Washington Chapter and endorsed by the Convention of the Institute at Buffalo, as well as the Tarsney, McKaig and Aldrich Bills in reference to the Supervising Architect's office, can be more efficiently advocated with the home office of the Institute located in the National Capitol.

3. Washington City is rapidly taking a prominent part among the cities of the country as an educational centre, here the Government has already collected a large number of valuable documents, books and material relating to history and the arts, as well as statuary in memory of the country's great men.

It seems that here should be collected and displayed for use, the material belonging to the Institute. Here should be placed paintings, monuments or tablets in memory of architects who have accomplished enough to be worthy of having their names honored.

It is in this city that the people of this and foreign countries expect to see and study such subjects.

4. The Government could give aid in the establishment of an Architectural Museum in this city when it would not in any other city of the country. Through Consuls and gifts from foreign governments, as well as appropriations, a museum could be started here under the auspices of the Institute that would soon surpass any similar collection in the country.

5. If the Institute desire to erect its own building, a site centrally located could be bought in this city at less cost than in any other city of the same magnitude. A location opposite one of the Government reservations would allow for more artistic treatment than would probably be available on sites that could be obtained at reasonable cost in other cities.

6. If it is not considered desirable to erect a building at the present time, two institutions in this city will assign rooms to the Institute.

The Corcoran Gallery of Art will, upon formal application, give the Institute quarters in their new building on 17th Street and New York Avenue, one of a group consisting of the President's House, Treasury, War, State and Navy Department Buildings—a building overlooking the mall, centrally located and in every way suitable for the purpose.

7. The Smithsonian Institution will form an association with the American Institute of Architects similar to the one they now have with the American Historical Association.

The Charter of the Institute in this case must be modified on the lines indicated in the Charter of the American Historical Association, a copy of which is attached to this report.

The Institute in this case would obtain rooms for the display of books, photographs and other matter pertaining to the Society and have their *Proceedings* printed by the Government free of expense.

In this way the *Proceedings* of the Institute could be more fully illustrated, and in them could be published measured drawings of some of the older buildings and drawings of merit as they are presented.

This would open a wide field of usefulness for the American Institute of Architects.

We submit this report with the request that the Institute be urged by the Chapter to make Washington City its permanent headquarters, and accept the offer of either the Corcoran Gallery of Art or the Smithsonian Institution.

(Signed) ROBERT STEAD, } Committee.  
GLENN BROWN, }

"Approved by the Washington Chapter with the request that the Institute act upon the report of the Committee.

(Signed) ROBERT STEAD, President W. C. A. I. A.  
GLENN BROWN, Secretary W. C. A. I. A."

The President thought that the Institute did not realize its strength, and expressed the opinion that money could be raised to provide suitable quarters.

After a full discussion it was *Voted*, That the report be referred to

the committee appointed at the St. Louis Convention, which committee shall have power to add to its membership, and that said committee be requested to report to the next meeting of the Board of Directors.

The Washington Chapter also presented a printed copy of a resolution passed at a meeting of the Chapter held on Friday evening, February 7th, in reference to the prominence given in the newspapers to Mr. Edward P. Casey, as architect of the Congressional Library Building. The report was received and ordered to be put on file, and Mr. R. D. Andrews and Mr. Frank Miles Day were appointed a committee to confer with Mr. Casey, and report to the Washington Chapter their findings in the matter.

Mr. A. H. Thorp's communication in regard to alterations in the schedule of charges was laid on the table, as the Board was not prepared to take the action asked for.

The proposal of I. Haas & Co., to publish a history of the Institute, together with photographs and biographical sketches of the officers and Fellows of the same, and "write-ups" and photographs of prominent builders, to be paid for by said builders, was declined.

Communication of Mr. E. L. Corthell, in regard to an International Congress of Engineers and Architects, was placed on file.

Communication of Mr. E. H. Bell, in regard to a Memorial to Mr. Hunt, was referred to the New York Chapter, with full power to represent the Institute in the matter.

Communication from Mr. A. E. Borie, in regard to a memorial to Mr. John Stewardson, was referred to the Philadelphia Chapter, with full power to represent the Institute in the matter.

The Board of Directors, in accordance with the powers vested in them, voted to elect Leopold Eidlitz, of New York, and George Keller, of Hartford, Fellows of the American Institute of Architects.

The applications of the following gentlemen were received, their drawings examined, and their names approved for submission to the Fellows of the Institute for election by letter-ballot: George Henry Clemence, Worcester, Mass.; Leon E. Dessez and Louis E. Stutz, Washington, D. C.; Will Sterling Hebbard, San Diego, Cal.

The Chair appointed Messrs. William C. Smith, of Nashville, George C. Mason, of Philadelphia, and Alfred Stone, a Committee of Arrangements for the Nashville Convention to be held in October, 1896.

Adjourned.

Attest: ALFRED STONE, Secretary.

#### NEW YORK CHAPTER A. I. A.

A REGULAR meeting was held in the Chapter quarters on Wednesday, February 12, 1896, at 8.30 P. M., Mr. Upjohn in the chair.

The minutes of the last meeting were read and approved.

The Secretary read a letter of January 13, 1896, from Mr. Dielman, Secretary of the Fine Arts Federation, giving the information that the matters under its consideration were: "The still doubtful site of the E. & S. Memorial." "The Preservation of the Palisades, now before the Executives of two States," "The Limiting of the Height of Buildings" and "The Exhibition at Berlin next Summer"; all subjects, the right direction of which would be creditable to the Federation and its component art bodies, and very important in regard to the hygienic and æsthetical conditions of the public.

The election of members being in order, Mr. H. F. Kilburn was, by ballot, unanimously elected a Practising Member.

News having been received of the death, on January 21st, of A. Page Brown, of San Francisco, Cal., the following resolutions, moved by the Secretary, were unanimously passed:

*Resolved*, That this Chapter greatly regrets to be informed of the untimely passing away of one of its members, A. Page Brown, for a number of years past a Practising Member of this Chapter, though a resident of San Francisco, and its loss is felt the more inasmuch as the length of time that has elapsed since his terrible accident, induced the hope that his good constitution and his comparative youth might, in the end, conquer in his struggle for life. Mr. Brown's highly artistic and successful adaptations to current work of the picturesque Spanish-Colonial architecture of the Pacific coast are well known, and the elaborate renderings of some of them have conspicuously served to enhance the brilliance of the various architectural exhibitions of late years in America, while one example of them, embodied in execution at the Columbian Exposition, excited general interest. He has left to the younger members of the profession an exceptional example of industry and devotion to his art, and a distinguished name on the roll of American practitioners and their representative Institute.

*Resolved*, That this resolution be transmitted to his family with the expression of the Institute's sympathy in their loss.

The Secretary said that Mr. Kendall and himself had received a visit from Mr. Slavomir Monkovsky, of Khabarovsk, Siberia, Chief Civil Engineer of the Amour Country, Russia, who was desirous of enlightenment as to the current methods employed in the erection of high buildings. He had given him a list of Chapter architects who had had the most practice in that kind of structure.

A vote of cordial thanks was passed to Mr. and Mrs. S. P. Avery and the Trustees of Columbia College for a copy, presented to the Chapter, as per Librarian George H. Baker's letter of January 11, 1896, of the very fine catalogue of the Avery Architectural Library, and the Secretary read an affirmative letter (of January 10, 1896,) from Mr. Baker in answer to a note from himself as to whether the Avery collection is not the most complete and valuable in this country and, perhaps, as a compact collection in one specialty, in Europe.

The Secretary presented a printed sheet covering the annual report of Mr. E. J. Lewis, Jr., Secretary of the Boston Chapter, for

the year 1895, and said he had asked him for some of the papers and discussions it mentioned. Other members said they had received and read it, and the Secretary was desired to thank Mr. Lewis and say it had been received with interest.

Among other communications presented were a letter (January 30, 1896,) from Secretary Dielman, of the Fine Arts Federation, calling attention to the fact that American painters and sculptors were invited through the American Consul-General, at Berlin, to participate in the International Exhibition to be held in that city during the current year; also a slip from the *New York Times* (of January 24, 1896,) showing that architects were included in the invitation.

Among other papers produced were: circulars (January 30, 1896,) from the Chicago Architectural Club in reference to its Ninth Annual Exhibition, and a letter from the Minnesota Chapter.

A. J. BLOOR, Secretary.

#### BEAUX-ARTS SOCIETY.

THE February meeting of the Society was held Monday evening, the 17th. Twenty-three members were present. After the dinner, and when a small amount of business had been disposed of, an elaborate ceremony of initiation was held for three new members, Messrs. Raymond F. Almiral, Geo. A. Ballantine and Henry F. Donnell. Preliminary models for the medal of the Society were on exhibition at the meeting.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

HOUSE OF CHARLES B. APPLETON, ESQ., ASPINWALL AVE., BROOKLINE, MASS. M. GUILLAUME GYNEN, ARCHITECT; REBUILT BY MESSRS. KINGSBURY & RICHARDSON, ARCHITECTS, BOSTON, MASS.

[Heliochrome issued with the International and Imperial Editions only.]

THIS structure, which was designed for and occupied by the exhibit of the Van Houten & Zoon Cocoa Company, was at the close of the World's Fair removed piecemeal from Chicago and reërected in its present position. A certain amount of remodeling of the interior arrangements was needed to adapt the building for use as a dwelling, but the exterior treatment is essentially unchanged.

#### PLANS AND INTERIOR VIEW OF THE SAME.

CHAPEL FOR THE RHODODENDRON ESTATE, NEAR BILTMORE, N. C. MR. RAFAEL GUASTAVINO, ARCHITECT, NEW YORK, N. Y.

THIS structure, built throughout of brick and tile cohesive masonry, is to be faced, roof as well as walls, with white brick and enamelled tile.

CARVED AND INLAID LAVABO, XV CENTURY, IN THE SOUTH KENSINGTON MUSEUM. MEASURED AND DRAWN BY MR. C. F. BRAGDON, ARCHITECT, ROCHESTER, N. Y.

PROPOSED FISKE MEMORIAL LIBRARY. MR. D. H. WOODBURY, ARCHITECT, BOSTON, MASS.

FORTY-THIRD STREET M. E. CHURCH, PHILADELPHIA, PA. MESSRS. JACOBY & WEISHAMPEL, ARCHITECTS, ALLENTOWN, PA.

[The following named illustrations may be found by reference to our advertising pages.]

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. V: CASINO AND TERRACE, MONTE CARLO. M. CHARLES GARNIER, ARCHITECT.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. VI: THE TERRACE, MONTE CARLO. M. CHARLES GARNIER, ARCHITECT.

#### THE SANCHI TOPE, BHOPAL, INDIA.

SKETCHES AT BAALBEK, ETC.

[Additional Illustrations in the International Edition.]

XVI CENTURY WELLS IN THE OLD TOWN, NANCY, FRANCE.

[Copper-plate Etching.]

#### GUGLIA DELLA CONCEZIONE, NAPLES, ITALY.

THE Guglia della Concezione in the Piazza del Gesù Nuovo was erected in the year 1748. In 1734, the Spanish Infant, Charles of Bourbon, had entered Naples, taking advantage of the complications which involved Austria and France on account of the succession to the throne of Poland, and as Charles III was crowned King of the two Sicilies on July 5th of the following year. While he interested himself in the excavation at Herculaneum, and later at Pompeii, he also gave attention to the enlarging and beautifying of the City of Naples. In 1747, he personally selected from many designs for the Column of the Virgin, that of the architect Giuseppe Genuino (born in Naples, 1710, died 1760), which was later carried into effect. In completing his work Genuino had the assistance of two able sculptors, pupils of Vaccari, Francesco Pagano and Matteo Bottiglieri, the last-named famous on account of his numerous statues in the churches of Naples and in the Cathedral of Salerno.

This column, like those of Fansaga, has in general appearance the form of an obelisk and is built upon a circular base with four buttresses at right angles. The shaft, perhaps, narrows too rapidly toward the apex, but this is compensated for by its original treatment. In place of a purely architectural embellishment of the surface are found many figures in relief which refer to the worship of the Virgin. There may be seen, also, in the volutes and other architectural features, figures of peculiar nature hitherto foreign to Italian baroque. The material is white marble inlaid with a darker shade; the figure of the Virgin, gilded bronze. The cost of erection was defrayed by contributions from the pious people and must have been a considerable sum, as the shaft is thirty metres in height. Carlo Celano, a contemporary of Genuino, describes it as "many miles."

This plate is copied from *Zeitschrift für Bauwesen*.

THE STAIRCASE HALL: GOSFORD HOUSE, LONGNIDDRY, SCOTLAND. MR. WILLIAM YOUNG, ARCHITECT.

THIS plate, copied from the *Builder*, reproduces a drawing hung at last year's Royal Academy exhibition. The pilasters, cornices and arches are carried out in Caen stone, while the columns, panels and balusters are of alabaster. Other views of the hall itself, photographically reproduced, was published in the *American Architect* for May 11 and June 1, '95.

TOWN-HALL, CLERKENWELL, ENG. MR. C. EVANS-VAUGHAN, ARCHITECT.

#### ENTRANCE DETAIL OF THE SAME BUILDING.



BALTIMORE, MD.—The Walters Art Gallery will be open to the public on all Wednesdays till May 1, on all Saturdays in April, and on Easter Monday.

BOSTON, MASS.—*Paintings recently purchased; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt*: at the Museum of Fine Arts.

*Paintings from the Paris Salons of 1895*: at the Jordan Art Gallery, 450 Washington St.

*Paintings and Pastel Portraits by Jacob Wagner*: at Chase's Gallery, 346 Boylston St., until March 5.

*Loan Collection of Portraits*: at Copley Hall, Clarendon St., March 2 to 23.

*Original Designs for Posters*: at the Pope Mfg. Co., 221 Columbus Ave., until February 29.

BRIDGEPORT, CONN.—*Second Annual Exhibition of Pictures*: at the Public Library, January 25 to March 15.

CHICAGO, ILL.—*Works by Gustave Doré*: January 21 to March 21, *Swedish Paintings*: February 4 to March 1, at the Art Institute.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures*: at the Metropolitan Museum of Art.

*Twenty-ninth Annual Exhibition of the American Water-color Society*: at the National Academy of Design, February 3 to 29.

*Eleventh Annual Exhibition of the Architectural League*: at 215 West 57th St., February 15 to March 9.

*Paintings by Philip Zilcken*: at the Macbeth Gallery, 237 Fifth Ave., February 17 to 29.

*Paintings by Henry Mosler*: at the Avery Galleries, 368 Fifth Ave., until March 7.

PROVIDENCE, R. I.—*Water-colors by Ross Turner*: at the Rhode Island School of Design, February 15 to 29.

*Exhibition of the Providence Art Club*: opens March 4.

SPRINGFIELD, MASS.—*Nineteenth Annual Exhibition of Paintings*: at James D. Gill's Gallery, until February 29.

WASHINGTON, D. C.—The Art Gallery of Thomas E. Waggaman will be open to the public on Thursdays during March and April.



**CASTS FROM THE COLUMN OF MARCUS AURELIUS.**—Upon one of the busiest squares in the heart of Rome, the Piazza Colonna, stands one of the world's most famous monuments. It is the Column of Marcus Aurelius, a high pillar, built of twenty-eight immense blocks of white marble toward the end of the second century in honor of that Emperor's victorious return from the war with the Marcomanni. Just at present much interest is aroused by the investigation by German and Italian archaeologists of the reliefs running up around the column. These, with the reliefs on the column of Trajan, form the best source of information as to the culture of our Teutonic forefathers, their arms, garb, etc. There has never before been a complete picture of the reliefs on the column taken, and in order to do it thoroughly, a scaffold has been raised alongside the column to the height of the crown, one hundred Roman feet above the ground. A square frame is suspended from the top, and supports a platform upon which all the work is done. Professor Petersen, Secretary of the Archæologic Institute of Rome, superintends the making of the *papier-mâché* cast of the reliefs, and the photographic reproduction is carried out by A. Bruckmann & Co., of Munich. The scenes of the relief describe in continuous pictures the long and difficult campaign against the tribes along the Danube. Episodes like the saving of the Roman Army through a rain-storm after a hot spell, which refreshed the legions almost worn out by fighting and a sultry heat; the establishment of a perfect military outpost at Vindobona (the Vienna of to-day), etc., are very vividly portrayed. Romans and barbarians appear as they did in life, with all their military trappings, in costume and armament true to history, allowing us a glimpse of the life in a Roman camp seventeen hundred years ago. — *Philadelphia Record*.

**LORD LEIGHTON'S HOUSE.**—Lord Leighton's house, which it is reported he has bequeathed for the use of his successors in the Presidency of the Royal Academy, is situated at 2 Holland Park Road. It was built for him by George Aitchison, A. R. A., some twenty or thirty years ago. Beautiful pictures, pieces of statuary and valuable *objets d'art* are everywhere visible. The large hall has its walls covered with brilliant blue-and-white tiles. On the staircase is a picture of the late President himself, done some years ago by his friend, Mr. G. F. Watts, R. A. Near it hangs an unfinished painting by Sir Joshua Reynolds of Lord Rockingham, seated at a table with his Secretary, Edmund Burke. Lord Leighton's larger studio is a lofty and well-lighted apartment, upon the walls of which may be seen, in addition to a cast of the frieze of the Parthenon, an immense number of sketches in oil and water-colors—mementos of many tours in Ireland, Italy, Spain, Palestine, Greece and Egypt. The works which fill the numerous bookcases bear evidence to the owner's cultivated literary taste and catholicity of mind. Beyond the large studio is a smaller one built entirely of glass. But the chief glory of Lord Leighton's residence is the far-famed Arab Hall. The roof rises into a dome, with eight small arched windows, each of which is filled with colored glass from the East, while on three sides of the hall are arched recesses. Each arch is supported by white marble columns standing on bases of green. The capitals of these columns consist of various sorts of birds from the chisel of the late Sir Edgar Boehm. In the hall of the house is a fountain, of which Lord Leighton used to tell an amusing anecdote. Not long after the beautiful house and its decorations were finished, certain more or less distinguished members of a "worshipful society" were entertained there, and, of course, made an admiring tour of inspection. They were in the Arab Hall, and the foremost gentleman (there were six in all) gazing delightedly at some object on an opposite wall, walked toward it, and so into the fountain. He was followed inadvertently by every one of his unlucky companions before they could be warned or had observed the sheet of water sunk below the level of the tiled floor, and they had to be fished out astonished and dripping. — *The Westminster Gazette*.

**THE "BALL-NOZZLE," AN HYDRAULIC PARADOX.**—*Engineering* lately gave a short account of the ball-nozzle, now being introduced into this country by the Anglo-American Ball-Nozzle Company, of 52 Oxford Street, London. As there described, this nozzle consists of a narrow tube, terminating in a bell mouth. A ball filling the bell is sucked up towards the issuing stream when the water is turned on, instead of being expelled, as would not unnaturally be expected by most of those who are unacquainted with hydro-dynamics. As a matter of fact, the explanation is very simple. If a gauge is attached to the nozzle of a fire-hose while at work, in such a way that it measures the pressure at right angles to the stream lines, it will be found that this pressure is practically equal to that of the atmosphere. It is true that if the stream is allowed to impinge directly on to a plate, a high pressure may be recorded, but the same thing would happen if a plate were put in front of a stream of bullets from a Maxim gun. The pressure transverse to the path of the bullets is simply that due to the atmosphere, and the same thing is true of a jet of water flowing freely through the air. Hence, in the ball-nozzle, when the water escapes between the edge of the bell and the ball, its pressure there is simply that due to the atmosphere. It remains to be seen what the pressure is at the point where the jet enters the bell. We shall find that this is less than that of the atmosphere. Neglecting the small amount lost in friction, it has to be noted that the same amount of energy is stored in one pound of the water, both where it enters and where it leaves the bell. Work may be stored in water, either in the shape of "velocity head," or "pressure head." That is to say, the energy of a moving body of water is dependent on its velocity and on its pressure. The work stored in one pound of such water is equal to  $\left(\frac{v^2}{2g} + h\right)$  foot-pound, where  $v$  is the velocity of the one pound of water at any part of its path and

$h$  is the corresponding pressure measured in feet of head. Suppose the water flows through a tapering frictionless pipe. Then, as the pipe contracts, the velocity must increase, as equal quantities of water pass each cross-section in a given time. Therefore, the velocity head is increased. Hence, as no work has been added to the water in the meantime, its pressure head must be correspondingly reduced. Thus, generally, when water flows through a tapering pipe, the pressure is least where the velocity is greatest, and *vice versa*. Now, in the case of the ball-nozzle, the velocity is least at the edge of the bell and greatest at the bottom of the bell. Hence the pressure at the bottom of the bell is less than it is at the point of escape. But at the point of escape the pressure is equal to that of the atmosphere. Therefore, at the bottom of the bell it is less than that of the atmosphere, and gradually increases from there until the point of escape is reached. Under these conditions it is easy to see that, if not too heavy, the ball will be pressed up against the issuing jet by the action of the external air. The action in question can be illustrated very simply in the following way: The left hand is opened flat, but with the fingers in contact with one another, and held palm downwards. There is then a crevice between the roots of the second and third fingers. A piece of paper, about one and one-quarter inches square, is then placed centrally under this crevice. On blowing through the crevice down on to the paper it will be found that it clings against the fingers, instead of being blown away. — *Engineering*.

**THE NELSON SARCOPHAGUS.**—How many of our readers are aware, we wonder, that the sarcophagus surmounting the tomb of Lord Nelson in the crypt of St. Paul's cathedral, is actually that which Cardinal Wolsey had prepared for the reception of his own body, and the handiwork of a Florentine sculptor of the early sixteenth century, Benedetto da Rovezzano? The statement has sometimes been made, but it is for the first time proved to be absolutely accurate in a very learned brochure on the work of Florentine sculptors in England, prepared by Mr. Alfred Higgins for the Archæological Institute. Between the great churchman and the great sailor the tomb has had most remarkable vicissitudes. The cardinal, who was great on monuments, had it prepared for himself in his lifetime, and obtained from Henry VIII the grant of the small building adjoining the east end of St. George's chapel, Windsor (now the Prince Consort's Memorial Chapel), for its reception. But Wolsey's fall interfered with these ambitious schemes, and when he died he was buried "before day" in the Abbey church, at Leicester. Moreover, while preparing his own tomb on a magnificent scale, he had left his promise to prepare another tomb for his royal master unfulfilled, so Henry, to repair that omission, took possession of the cardinal's tomb, used "so much as he found fit, and called it his." That tomb, which was finally adorned with a profusion of metal work and statuary, and in its total effect Mr. Higgins thinks, comparable only to the tomb of the Emperor Maximilian at Innsbruck, was dismantled during the civil wars under the ordinance "for the removal of scandalous monuments and pictures," and it was found impossible to restore it at any later date. But the sarcophagus and base remained *in situ* until some time between 1808 and 1810, when they were brought from Windsor to St. Paul's to make part of the Nelson monument. Their identity is absolutely established by Mr. Higgins's investigations. He has made careful measurements of the Nelson sarcophagus, and found it to correspond in its dimensions with the particulars given by Benedetto da Rovezzano in his inventories, which are still extant. Nelson's body does not, of course, lie in the sarcophagus, but in a vault underneath, but we have the curious fact that the tomb which was prepared by the cardinal for his own body, grabbed by Henry VIII for the royal tomb, defaced by a Puritan parliament as a "scandalous monument," now forms part of the national monument to the great captain. In other words, Nelson has the sarcophagus which Wolsey intended for himself. — *Exchange*.

**DECREASE OF NATURAL GAS IN INDIANA.**—Indiana is told by the State Gas Inspector that it must be economical with its natural gas. The rock pressure, which originally was 325 pounds to the square inch, is now 230 pounds, and the inspector has no doubt that the pressure will decrease more rapidly hereafter. "It is certain," he says, "that we have entered on a period of decline and that the supply will finally become exhausted." The report is of deep significance to Indiana, the cheap fuel having been the means of bringing to the State hundreds of factories, representing many millions of capital and employing more than 20,000 people. There is an encouraging feature in the situation, however: in the Indiana gas field, the inspector reports, there yet remain many thousand acres of fertile territory untouched by the drill, except an occasional well to test the productiveness of the field, hold the leases or supply the farmers with fuel. A large part of this territory is owned by pipe-line companies, who are holding it in reserve for future use. — *N. Y. Evening Post*.

**MOUNTAIN MAHOGANY.**—One of the most remarkable products of Nevada is a species of wood known as "mountain mahogany," which, when dry, is as hard as boxwood, very fine grained, of a rich red color, and in weight very heavy. It has been used for boxes for shafting, and in some instances for slides and dies in quartz batteries. It burns with a blaze as long lasting as ordinary wood, and it is then found, almost unchanged in form, converted to a charcoal that lasts twice as long as ordinary wood, giving an intense heat, greater than coal gives. Another notable species of wood, having extraordinary durability is said to be the quebarcho wood of Argentina. Posts that have been in the ground for one hundred and fifty years in soil alternately sodden by tropical rains or parched by intense heat, are found to be in sound condition. The wood is also described as free from attacks of insects, does not decay and is not compressible, and weighs nearly eighty pounds per cubic foot. — *The Churchman*.



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MARCH 7, 1896.


**SUMMARY:—**

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THE proposed bill for the creation of a national art commission, to have the power of passing upon the designs of coins, postage-stamps, paper currency and other works of art issued by, or purchased in behalf of, the National Government, together with those of the public buildings of the United States, does not meet with the approval of "a little company of New York gentlemen," who "hold that freedom and fair play are essential to true artistic development." In what way the Public Art League is likely to interfere with "freedom and fair play" in art we should be at a loss to imagine, were it not that the postal card on which the "little company of New York gentlemen" disseminates its warnings against the "dangerous measure" under consideration informs us that the proposed bill is, "in naked truth," "the first move in a bold scheme whereby a formidable ring of New York sculptors and painters seek to control every art work in which the Government has an interest, to the complete exclusion of the great body of American artists everywhere." We presume that the "little company of gentlemen" must have some evidence to support this assertion, or they would not have made it; but they will have hard work to convince people of the truth of it without supporting their statements with something besides their mere word.

SO far as internal evidence is concerned, the claim that the bill for the establishment of the Public Art League of the United States is promoted by, or in any way, directly or indirectly, intended, either now or later, to put "a formidable ring of New York sculptors and painters" into control of the public art, appears utterly ridiculous. The idea of a "ring," either formidable or otherwise, among painters and sculptors will amuse people acquainted with the ways of artists; while, even if such a ring existed, the names of the persons who have taken most interest in urging the passage of the present measure, are very far from suggesting any connection with any such ring, and, perhaps, least of all, a ring of New York artists. Moreover, even supposing that the "formidable ring" of painters and sculptors of the metropolis is secretly at work behind the array of architects, editors and Government officials whose names are put forward as supporters of the measure, it remains to be explained how they are to profit by its enactment. The "little company of gentlemen" say that "first-class artists could not be induced to submit their works to the

judgment of an official and permanent Commission, whose appointment must, in the nature of things, be governed by political influences and wire-pulling." Without criticising the gratuitous assumption that the members of the Public Art League will owe their appointment to "political influences and wire-pulling," we should be glad to know why "first-class artists" are likely to be unwilling to submit their works to the judgment of such persons. Certainly, all the artists who wish to work for the public must expect to "submit their works" to some one's judgment for approval; and the idea on which the movement for the creation of the League is based is that artists of the highest class will be more willing to offer their work to the judgment of a permanent Commission, whose members, even if political influence should have a share in their selection, will certainly not be appointed unless they are known to have some familiarity with matters of fine-art, than to submit it, as has been the rule hitherto, to the caprices of men absolutely ignorant of the entire subject. So long as it was currently supposed among the artists of the country that only female sculptors with long curls had any chance of securing commissions for the United States Government, artists who could not boast these advantages, however great their merit in a professional way, declined to waste their time in hopeless competition; and the history of the Columbian medal, although by no means discreditable to the officials concerned, shows how serious are the misunderstandings which may arise between artists and officials who know very little, and care much less, about the æsthetic questions to which they are sometimes compelled to give a reluctant attention. An Art Commission, whether appointed by "wire-pulling" or not, will be required to devote itself systematically to these things. Its acts will be sharply criticised, and it will neither be able to award contracts for statues to the candidate with the most engaging smile, nor to defer looking at a design until it is put in execution. This systematizing of the methods of selection in the public art would be a great gain, even if the Commission had no further influence in the matter; but it is not conceivable that such a Commission should not always be composed of men of trained judgment in such things; and a commission of members of this sort, by means of its suggestions to Congress, its official programmes for competitions, its reports of its proceedings, and its mutual relations with artists and the public, may become an extremely important factor in the development of American art.

THE Royal Gold Medal of the Royal Institute of British Architects is to be bestowed this year upon Mr. Ernest George, whose work is well known to American architects. Ernest George, if we are not mistaken, was originally a professional artist, whose water-color pictures and, still more, his etchings, were widely known before he turned his attention to architecture. His adoption of this as a profession was a fortunate matter for the public, for some of his work has a charm surpassing that of any other English architect. He would naturally be compared with Mr. Norman Shaw, and the latter may undoubtedly be regarded as his superior in dignified composition, and, when at his best, in a certain greatness, but in Mr. George's work one constantly finds pieces of effect with which one, so to speak, falls in love on the spot. With all his artistic feeling and love of the picturesque, also, Mr. George is said to be a skilful and sensible practitioner, and the honor intended for him will, in this country, be thought well bestowed.

MOST of our readers have probably read with interest the observations made upon the nitrifying bacteria of the soil, made first by Messrs. Schloesing and Müntz, and continued at our own Lawrence Experiment Station, and elsewhere; and will be curious to follow the development of the investigations which have been made into the subject. Quite lately, M. Winogradsky, who, like the experimenters of the Massachusetts State Board of Health, has succeeded in isolating the nitrifying organisms, has announced that, for the complete conversion of organic matter in the soil into nitrates, three sets of animalculæ must work together. The first change that the dead organic matters in the soil undergo is a conversion of their nitrogenous portions into ammonia. This conversion, as M. Winogradsky finds, is produced by a certain set of bacteria,

known together as the ammoniacal ferment. After the conversion into ammonia, a second set of bacteria take up the work. These little organisms, which are known as the nitrous bacteria, are well known to science, having been repeatedly isolated and studied. They are rounded or elliptical in shape, slow-moving, and disposed to cluster in masses. After they have oxidized the ammonia compounds into nitrites, they turn over the material to a third set of workers, the nitric bacteria. The nitric bacteria are very different from the others, being lively little rod-like creatures. They cannot, by themselves, produce the ammoniacal fermentation, neither can they convert ammonia into nitrites; but they take the nitrites delivered to them by their plump little brothers, and oxidize them into nitrates. This completes the conversion, the nitrates being stable compounds, and suited to be taken up by plants as food.

**E**LECTRICIANS and others may be interested to learn that a solution of permanganate of potash, which can be obtained at almost any drug-store, is found to be an excellent remedy for burns. Among electricians, who often suffer from burns caused by hot wires, it is of great importance to have some of this solution ready. As soon as possible after a burn is received, the place should be bathed with it, keeping up the application for several minutes. The skin of the part affected will turn black, from the reduction of the manganese salt, but the pain will be relieved; and, a few days later, the injured tissues will be found to be healed.

**T**HE question what to do with the Bulfinch portion of the Massachusetts State-house is a matter that will not down. The present Legislature has before it three bills, one that proposes the demolition of the building and an open competition for designs for a new "Capitol"; the second, proposed by the Commissioners in charge of the annex, seeks to destroy the old building and then reproduce it at a somewhat enlarged scale, with new material, altered dimensions, changed proportions and new features, which, nevertheless, are alleged to restore the old building on its original lines; the third seeks to retain the present building and to make it permanent by fireproofing the structure throughout. The cost of these several methods may be compared as being \$6,000,000, \$1,250,000 and \$400,000, so that ordinary business economy favors the *actual preservation* scheme, and when this scheme preserves in unimpaired and consecutive form the associations connected with a century of the Commonwealth's history and the City's growth, and when it will meet the wishes of that portion of the community which has shown most interest in the question as attested by their numbers and their pleadings, at the numerous Legislative hearings, it would seem that decision must be made in favor of the least costly and, sentimentally, most desirable scheme. The question ought properly to lie between an absolutely new and costly building and the strictly proper restoration of the present building. The scheme proposed by the present Commissioners is a compromise and a make-shift and, if adopted, will result in dissatisfaction to every one save the Commissioners themselves—even to their architect, who would always regret that he was not allowed to do something else.

**W**E find, in a series of articles on iron construction, in the *Deutsche Bauzeitung*, some extracts from the standards and specifications for ironwork of the Bavarian State railways, which will be interesting to American readers. As a general rule, the specifications require that all parts of structures shown without joints in the drawings shall be made in one piece, forged, bent or cast, as the case may be, no welding or sweating together of portions being allowed except by express and special permission of the State engineers. All pieces must be straightened at a red heat, at the mill. Small irregularities may be corrected when the metal is cold, but even for these, presses and special machines are to be used in preference to hand work, and no working whatever of metal at a "blue heat," either hot or cold, is permitted. Where hammer-work is necessary, the hammer must be so formed as not to make dents in the material; and straightening with the hammer is not allowed on cold metal. Plate metal, more than half an inch thick, is to be worked only at a red heat. All trimming must be done, as far as possible, with a hack-saw, or in the planing-machine; and pieces cut with shears must have at least one-twelfth of an inch of metal left next the

cut, which is to be taken off with a planer, or hack-saw, or file, as the case may be, to reduce them to the proper dimensions.

**T**HIS last provision reads curiously to Americans, who would open their eyes wide at the idea of cutting a gusset-plate wider than the drawing, so as to allow of filing it down to the proper dimensions; but iron machinery on the Continent does not, apparently, always work as smoothly as ours, and the German engineers seem to be still possessed with that fear of shattering the edges of a cut, or a punched hole, which once prevailed here. The same ideas pervade the rules for riveting, some of which are, however, worth remembering. In all cases, rivet or bolt holes must be brought together, if they do not coincide exactly, by boring, the use of drift-pins being strictly forbidden. Where the rivets or bolts intended for a given set of holes are to be subjected to a shearing strain, the holes must be absolutely true. When it is possible to do so, all the pieces must be drilled together. In cases where this is impracticable, the pieces may be bored separately, with a drill of smaller diameter than the finished hole; and, after securing them together by this means, the small holes are to be enlarged to the proper size by means of a reamer. Where the rivets are not to endure a shearing strain, a variation in the position of the holes, not greater than one-twentieth of their diameter, is admissible. This would seem to our bridge-builders a tolerably liberal margin, but the German engineers may be stricter than ours in looking for shearing strains in rivets. All rivets, according to the rules, having a diameter of more than nine millimetres, or about three-eighths of an inch, must be driven red-hot; the scale must be removed before driving, and the pieces firmly bolted together before riveting. The head of the rivet must be fully formed, and the length must be sufficient to provide for this, as well as for thoroughly filling the irregularities of the rivet-hole. A curious rule, with which workmen driving small rivets in heavy pieces of iron must find it difficult to comply, is that the head must be formed so quickly that, after its completion, there shall still be a red-hot spot in the centre. The head is also required to be free from cracks, and to have its centre exactly in the axis of the rivet-hole. Where a long row of rivets is to be driven, the driving must begin in the middle, proceeding in each direction to the ends; and it is strictly forbidden to begin riveting at the end, and proceed toward the middle. After the rivets are driven, they are to be inspected, and all that are found loose, or not in accordance with the other rules, are to be cut out, and replaced by others in conformity with the specification. The loading and unloading of structural iron must be carefully done so that the pieces may not be bent or injured; and, if any piece should be so injured, notice must be given at once to the State engineers, who will give directions for remedying the trouble.

**T**HE Russians, who, whatever may be their faults, are certainly not lacking in energy, appear to possess the most active organization of architects in Europe, in the St. Petersburg Society of Architects. This body recently celebrated its "silver wedding," on the occasion of the twenty-fifth anniversary of its foundation, by a general assembly, held in the great hall of the Academy of Fine Arts, and presided over by the Grand Duke Vladimir, who is the honorary President of the Society. After the opening festivities came an exhibition of the work of the Society since its foundation, followed by a banquet. The Society has reason to be proud of what it has accomplished. To say nothing of two successful exhibitions, one exclusively artistic, and the other exclusively technical, it has organized a Congress of Russian architects; has succeeded in establishing rules for the conduct of public competitions; has raised a fund for the relief of the widows and orphans of deceased architects, and has intervened with effect for the preservation of historic buildings; and, during the last war, it established and maintained a camp hospital in the field. Some of our readers may remember that, about twenty-five years ago, the Russian Government, expressing the opinion that the American practice of architecture was better suited than any other to Russian needs, sent to this country for one or two young architects, to initiate the Russians into American ways. Now, in some respects, at least, the tables are turned, and American architects can learn much, in regard to the social side of their professional life, from their Russian brethren.

# EVERY-DAY ITALY.<sup>1</sup>—II.

A TRAMP IN THE TUSCAN HILLS, FROM SIENA TO SANTA COLOMBA.



Porta Camollia, Siena.

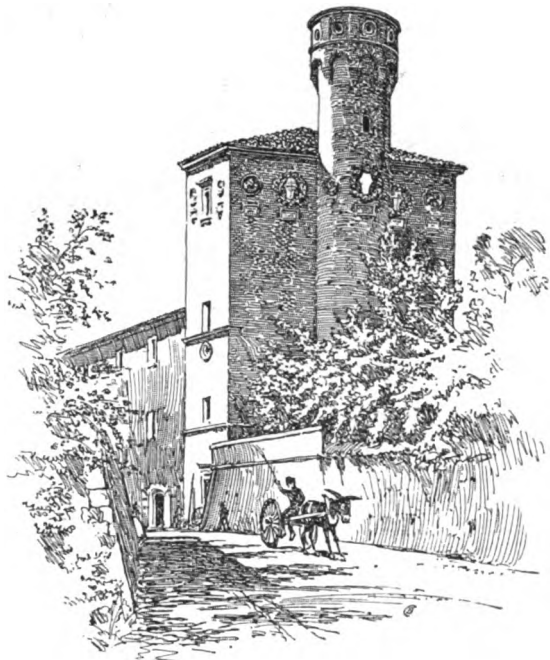
MORNING hours are precious to the walker, and it was not yet six, when, leaving the dark, still, stone-lined streets of old Siena, I passed beneath the great arch of the Porta Camollia, and emerged into view of the beautiful Tuscan hills, on the long road to the villa Santa Colomba.

There are two Camollia gates, an inner and an outer, with a wide plain, the *Piazza d'Arme*, between them, memorable among other things as the theatre of one of the scenes in Pinturicchio's fine frescos in the library of the cathedral—the betrothal of Emperor Frederick III with Eleonora of Portugal. The column, erected to commemorate the event, and shown in the fresco, is still standing. The outer gate is very impressive, though it consists of nothing more than a brute mass of brickwork with an arcaded cornice and castellated top, pierced on the outer side by an enormous arch of stone. The interior is painted with some now faded frescos, and the vaulted ceiling is decorated in blue and gold—gold stars on a blue ground—a favorite scheme of ceiling decoration with the Italians, and a very beautiful one.

Half a mile beyond the gate a turn of the road disclosed the famous Palazzo dei Turchi, or Palazzo dei Diavoli, as it is popularly called. I was at some pains to discover the origin of this singular title. The most reasonable explanation seems to be this: that in one of the frequent wars in which the men of that early time engaged—much as we of to-day engage in trade—during a sortie made from the palace, then in a state of siege, its inmates fought with such desperate valor that the repulsed and disconcerted enemy, to save its name for bravery, no doubt, declared that such warriors could not be men, but must be devils, and “House of the Devils” the place continues to be called until this day.

The charm of the building is quite indefinable, and cannot be conveyed by descriptions, drawings or photographs. It was built in the fifteenth century during the golden noon of the Renaissance, by one Federighi, whose hand appears in many lovely bits of sculptured detail within the city walls. It is of brick, the ornament and mouldings being of terra-cotta, of a dark salmon color, with detail as delicate as lace and strong as steel, of that chaste quality, classical yet original, which better than anything distinguishes the earlier from the later Renaissance. The composition consists of three loosely-joined and apparently little related parts, disposed quite unsymmetrically—almost at haphazard, it would appear, though such is far

from being the case, for herein lies the secret of the building's charm. By means of its two articulations it fits the double turn of the road like a glove, and presents from each direction a different aspect: towards the city the exquisite little chapel (once, perhaps, an open loggia), and toward the *contorni* the high and frowning



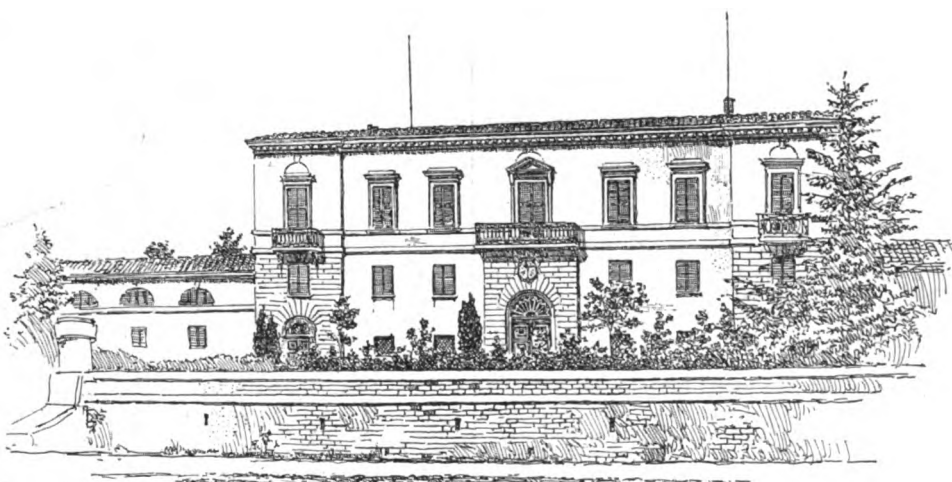
Palazzo dei Diavoli, near Siena.

fortress-like construction with its central circular tower—a truly mediæval motive made beautiful by the skill of the Renaissance designer. There is something very grim and even terrifying in this façade, seen at a distance down the road against the sky; it looks like some giant locomotive rushing forward on the high stone walls for rails. These two aspects of the same building fitly symbolize the dual character of the men who made it, the early dwellers in these walled Italian towns, for to the outer world they presented an always hostile and belligerent front, but among themselves exhibited those finer graces, the love of art and of literature, which were equally theirs.

A little farther on I passed the ancient Villa Mocenna, almost screened from view by dense foliage and a high stone wall. Beyond it was the Villa Sergardi, *Torri Fiorentina* with a long, plain, symmetrical façade which permitted only a glimpse of the formal, Italian garden behind it, with its balustraded terrace, sweeping out in a great curve overlooking the valley. Another half a mile or so brought me opposite the Villa Bardia, which sets as snugly on the top of the hill as though it grew there.

Following the directions given in “Baedeker,” I took a branch

road whose junction with the highway was marked by towering cypress-trees—two on either side. This soon led me to the brow of a hill overlooking a vast valley, into which the road descended in a sinuous line of white, appearing and disappearing. Behind and to the left lay the city, looking at that distance not very different from when Dante's eyes beheld it, and from the time when lived those other great ones from whom emanated the glory which we



Villa Setgardi, near Siena.

name the Renaissance—hardly different at all. The two towers, of the Palazzo Pubblico and of the Cathedral, so beautiful and yet so widely different, rose to an equal height and dominated, as they should, as symbols of the Church and State, all lesser edifices. Beside the latter campanile, clearly defined against the sky, towered the great wall of the Opera del Duomo, with its single blank arch staring down at the old city like a sightless eye. This incomplete and mutilated structure, beautiful, even yet like a beggar at the door

<sup>1</sup> Continued from No. 1061, page 74.

of a church, seemed always to recount the tale of the calamity which brought it to such plight. Siena in her prime, rich, powerful, populous, the rival even of great Florence, was to have had a cathedral worthy of her, second to none in Italy, and to that end work was begun upon a building of which the now existing church would have formed a transept only. Then came the great plague of 1348, which swept away two-thirds of all the inhabitants, and from which, to this



Villa Bardia, two miles from Siena.

day, Siena has not recovered, for the city is shrunken away from its walls, like a dry nut from its shell, and gardens grow where once were busy streets. After this calamity the ambitious plan was abandoned, and the more modest one adhered to. Only some mutilated walls and columns adorned with exquisite Gothic detail, black from exposure, like soiled lace, remain to tell how grimly Fate sometimes deals with human pride.

Before me and below me lay the valley, green with vines festooned from tree to tree, and yellow with the harvest of grain which hundreds of busy men and women were engaged in gathering in primitive fashion, with sickles, to be threshed out afterward with flails. All about were the hills, rising one beyond another, like the waves of the sea. On their fertile slopes grew corn and grape and the gray olive, and their ridges were outlined against one another and against the sky by darker masses of spreading stone-pine, and bayonet-pointed cypress, planted in long, regular rows like soldiers on parade. Farms and villages nestled in the cosy laps of the hills, and every summit wore on its brow a tower or villa like a crown.

Far on the opposite slope I discerned a large light-colored building which I knew must be the Villa Santa Colomba, from the two-storied loggia which forms a principal feature of the façade. A road led past it up the hill, and nothing seemed easier than to reach it, so dismissing from my mind all further anxiety on that score, I began my descent from the cool hill-top into the sweltering plain.

It was very interesting to watch the life which went on in the fields by the roadside: the men and women laboring equally together, the brown, barefooted children, to whom work was as yet only a new and absorbing kind of a game: the great gray oxen with their wide, indignant eyes, whose slow and dignified movements were in such great contrast to the briskness of the furry little donkeys, hardly bigger than dogs, that looked so shrewd and cynical and pretended not to mind the beatings they were constantly receiving.

I was so preoccupied in watching all this as I walked along, that I quite forgot about my destination, and when next I looked where the villa should be, it had disappeared. I was surprised, almost astounded. It did not seem possible that so large an object at such a height could vanish utterly and leave no trace, and even after I had discovered the cause of the singular phenomenon I still retained a sense of something magical about it. Expecting to see the villa appear beyond each hill which the road skirted, I kept to the level instead of mounting as I should have done. The country began to assume a very different aspect; it was no longer cultivated, and the way led through a second-growth wood full of underbrush. At every turnpike signs were posted up warning the traveller to beware of bandits. These gave me very little uneasiness, as I looked more like a bandit myself than a promising victim, so buttoning my coat over my watch-chain I continued unwittingly to increase my distance from the Villa Santa Colomba. Finally it came again into view, but this time far behind and above me. I reached it from the rear by a long detour and a stiff climb through an olive orchard. There I lay down flat on my back for a long sweet rest, and watched the little gray leaves above me twinkle against the sapphire midsummer sky. I would have gone to sleep so, if the flies would have let me.

I made it my first business, on arising, to discover if possible the cause of the villa's total invisibility from the valley immediately below. The explanation proved very simple: I found that a considerable plain intervened between the front of the villa and the brow of the hill, and behind it the building disappears as it is approached, exactly as the dome of St. Peter's sinks below the façade.

The whole thing seemed so artful that I think it may have been deliberately planned, perhaps in those ancient times when a fortress occupied the site and there was reason for such ambush.

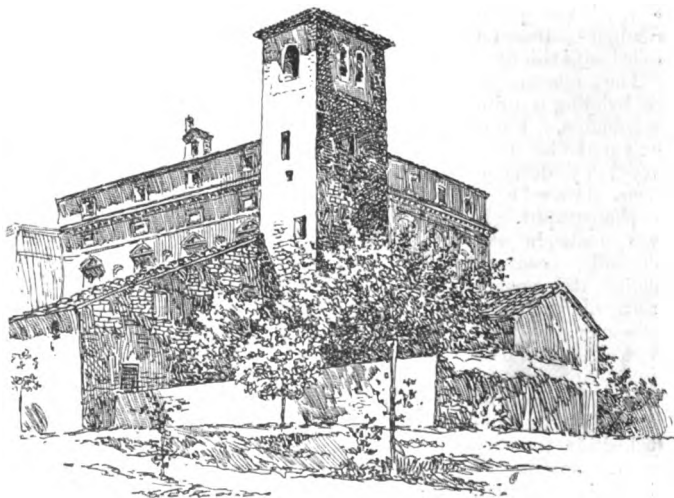
The villa as it now stands, with the exception of the large addition in the rear, is the creation of Baldassarre Peruzzi, one of the greatest architects of the later Renaissance, whose other works may be studied in Siena, Rome and Bologna. His buildings are distinguished for their dignity, and the beauty of their proportions, and the Villa Santa Colomba possesses both these qualities in full measure.

The façade, though somewhat overloaded with the heavy and corrupt detail of the period in which it was built, is perfectly simple and straightforward in its main scheme, and the proportion of void to solid, and the relation of vertical members to horizontal, is perfectly satisfying to the eye. The principal feature of the design is a completely engaged loggia of three arches, in both the first and second stories, the upper one of which commands a view remarkable in beauty and extent. The batter of the first-story walls is all that remains to indicate that the pleasure-house was formerly a fortress. A lesser architect would doubtless have been at some pains to suppress this feature altogether, but Peruzzi, by frankly accepting it as one of the conditions of his design, has so given the building an altogether distinctive character; it seems now to be part of the hill itself.

The villa is owned by the Collegio Tolomei, and is, I believe, used by them as a school in winter, but it was now midsummer, and the place was all but deserted. Two donkeys stabled underneath the portico, some clothes spread out to dry upon the lawn, and some ragged children wide-eyed with wonder at the presence of a stranger, were all that indicated habitation.

The heavy door to the garden stood ajar, and I pushed it cautiously open and stepped inside. I found myself in fairyland in a moment. At the time I could think of nothing to compare it with but the Palace of the Sleeping Beauty, but now I believe it was more like Doctor Rappaccini's garden, in Hawthorne's immortal story, and the old man passing up and down the garden paths with a watering-pot, old Rappaccini himself tending his poisonous flowers. The whole place was enclosed by high brick walls, except at the end adjoining the villa, where there were low buildings which might once have been the stables. The beds and paths had been spun over with a mass of vines and bushes, but the ancient formal and symmetrical arrangement was still traceable by means of the rows of gigantic terra cotta pots containing plants of a tropical luxuriance of foliage, like those one sees in Abbey's drawings, and of which we had a very good counterfeit on the balustrades at the Chicago Fair.

The old gardener, passing up and down among them, paid no more heed to my entrance than as though he had been what he appeared — a being from a different world. As he was about to vanish into the house I called to him, and in bad Italian asked for something to eat and permission to visit the interior of the villa. He only answered by a toothless smile and went his way. I despaired of ever seeing him again, and settled myself for a sketch on the road outside, but in a few minutes he appeared before me bearing a ponderous iron key, not as big nor as heavy as a crowbar, but suggesting the comparison. He led me first to a little hovel where I regaled myself upon bad bread and cheese and excellent red wine, and discoursed at the same time with the handsome woman who served me in an improvised sign language when my Italian failed. I began by telling her that I had walked that morning all the way from Siena, but as I had forgotten the word for "walk" I had to get up and illustrate by marching across the floor. She answered incomprehensibly and then made her meaning clear by laying her head, with an air of great lassitude, upon her arm, and in such manner we continued our conversation. When I had finished, and paid the absurdly small account, old Rappaccini led me to the front of the villa and pried open the ponderous front door with his key. We entered a large, damp, dismal chamber, from which a door at the left admitted us to the stairway, which is justly celebrated as being the finest feature of the interior. It winds upward very gently, about a circular well supported on a Doric colonnade. Here, again, is evident



Bell-tower of the Villa S. Colomba, five miles from Siena.

the hand of a master, for the difficulties and complications of such a treatment, which every architect knows, have all been so marvellously overcome or cleverly avoided, that it seems as though stairways ought always to ascend in circles, and columns to be as necessary an adjunct as treads and risers.

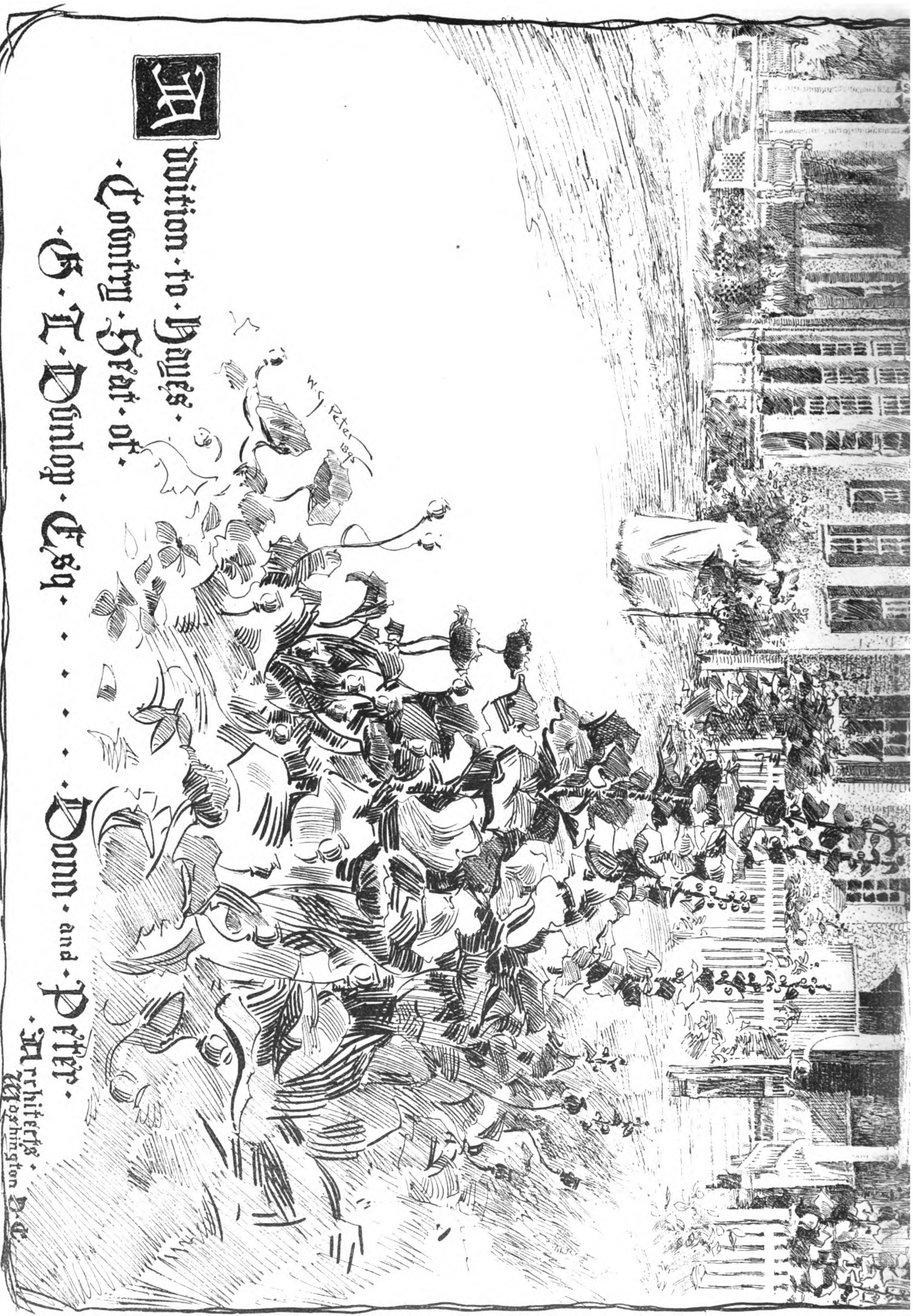
There is a story that an underground passage, starting from the bottom of the staircase-well, once connected the Villa with Siena,



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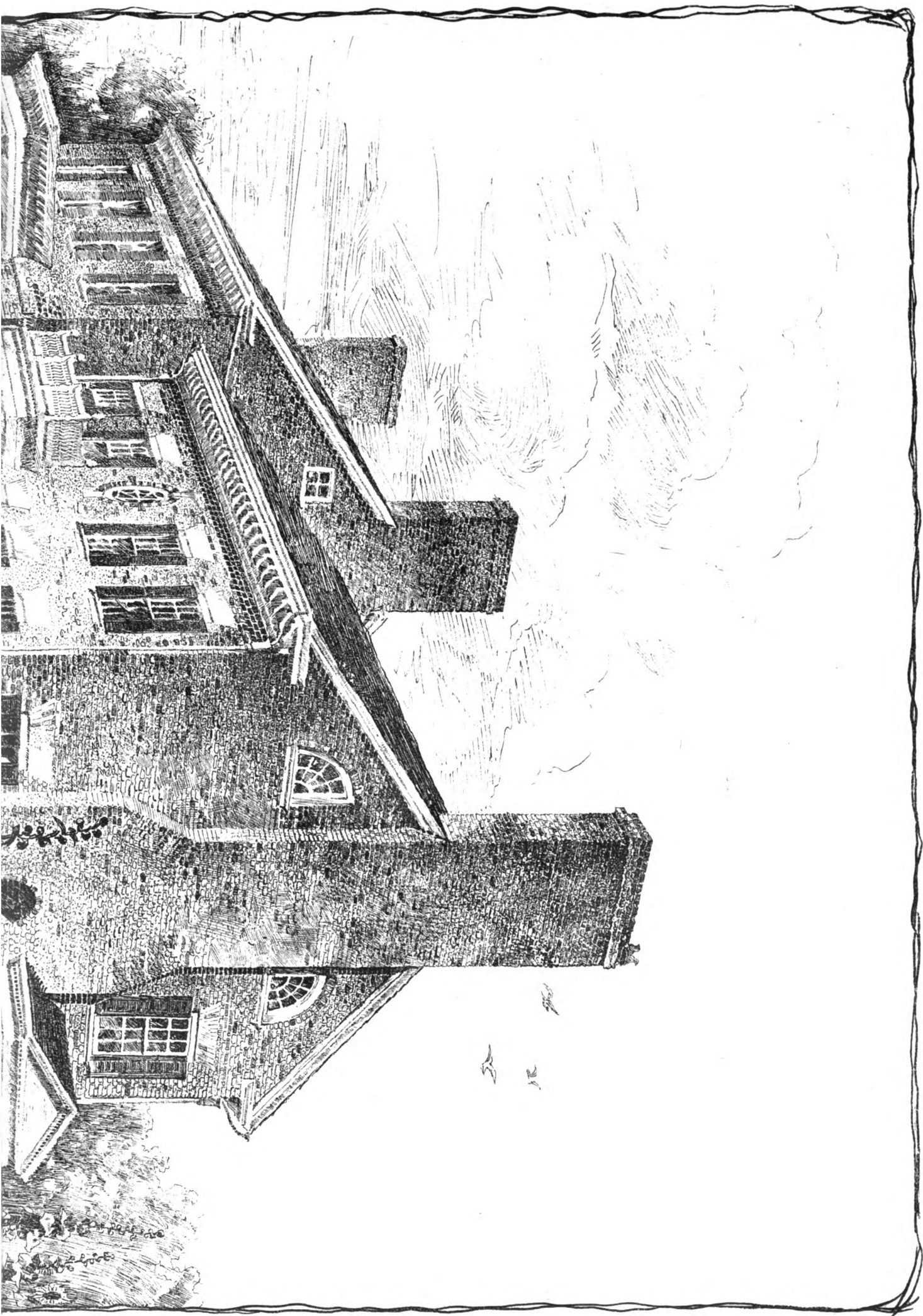
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AMERICAN ARCHITECT AND BUILDING NEWS, MAR. 7, 1896.

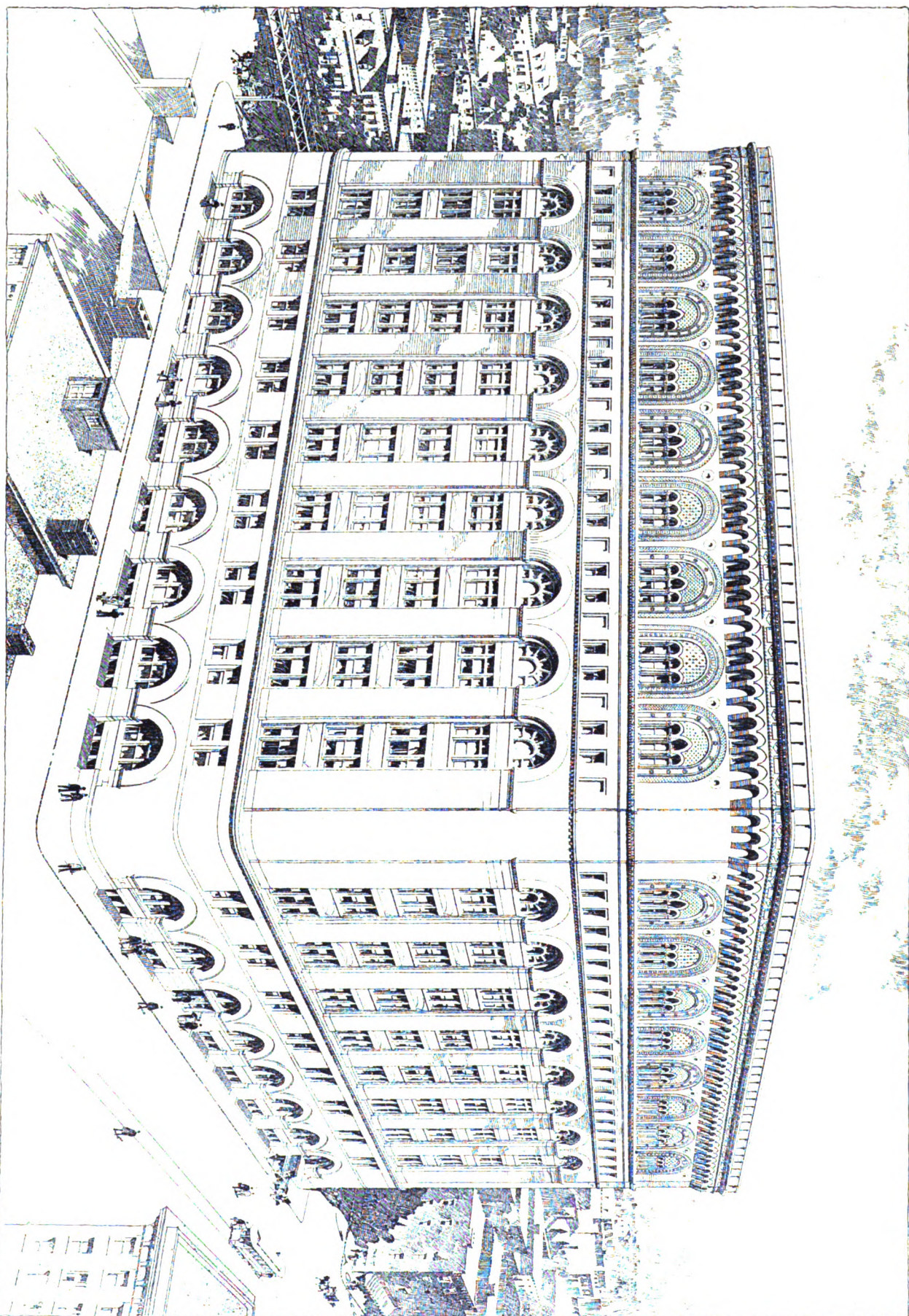
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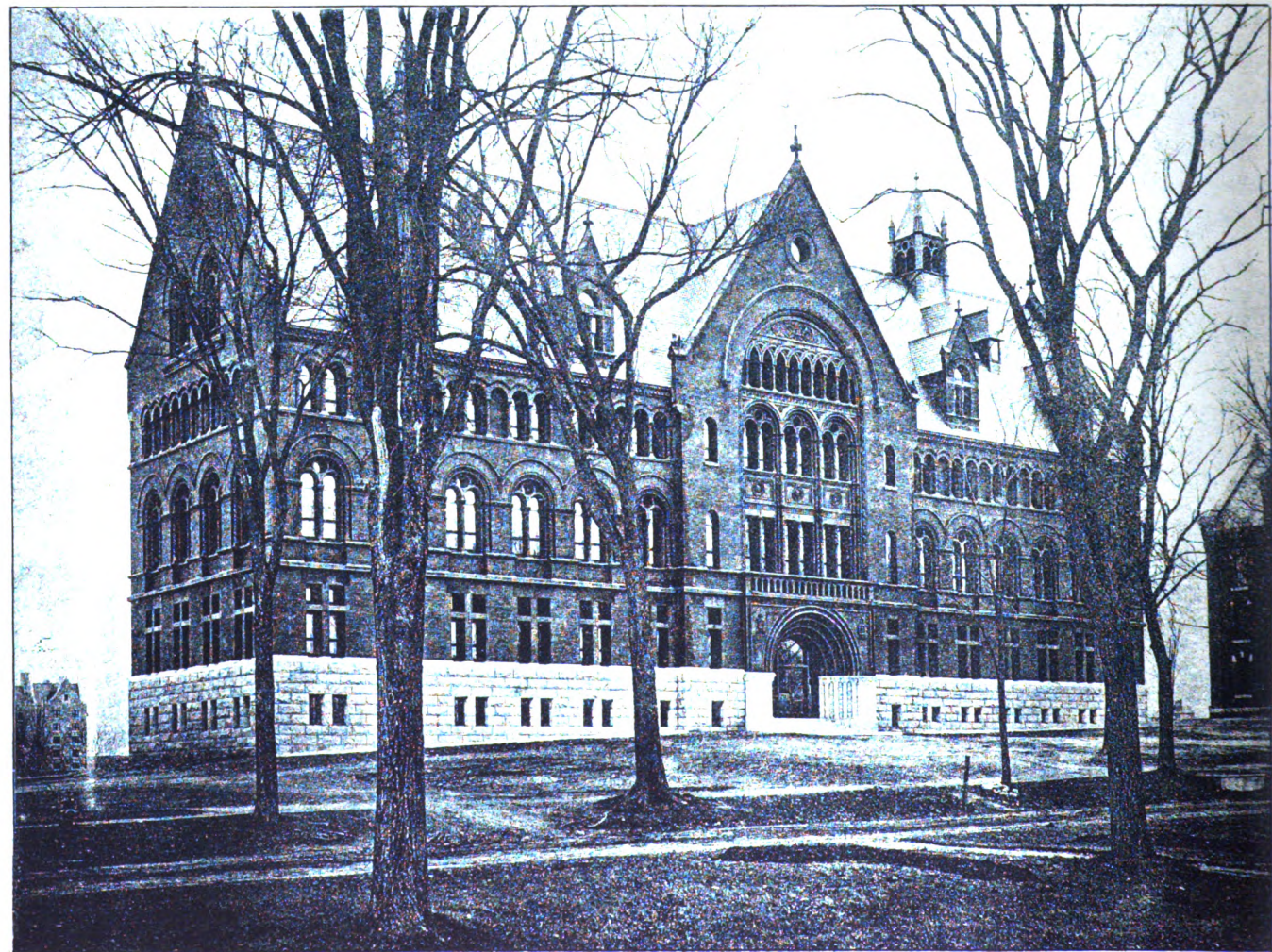
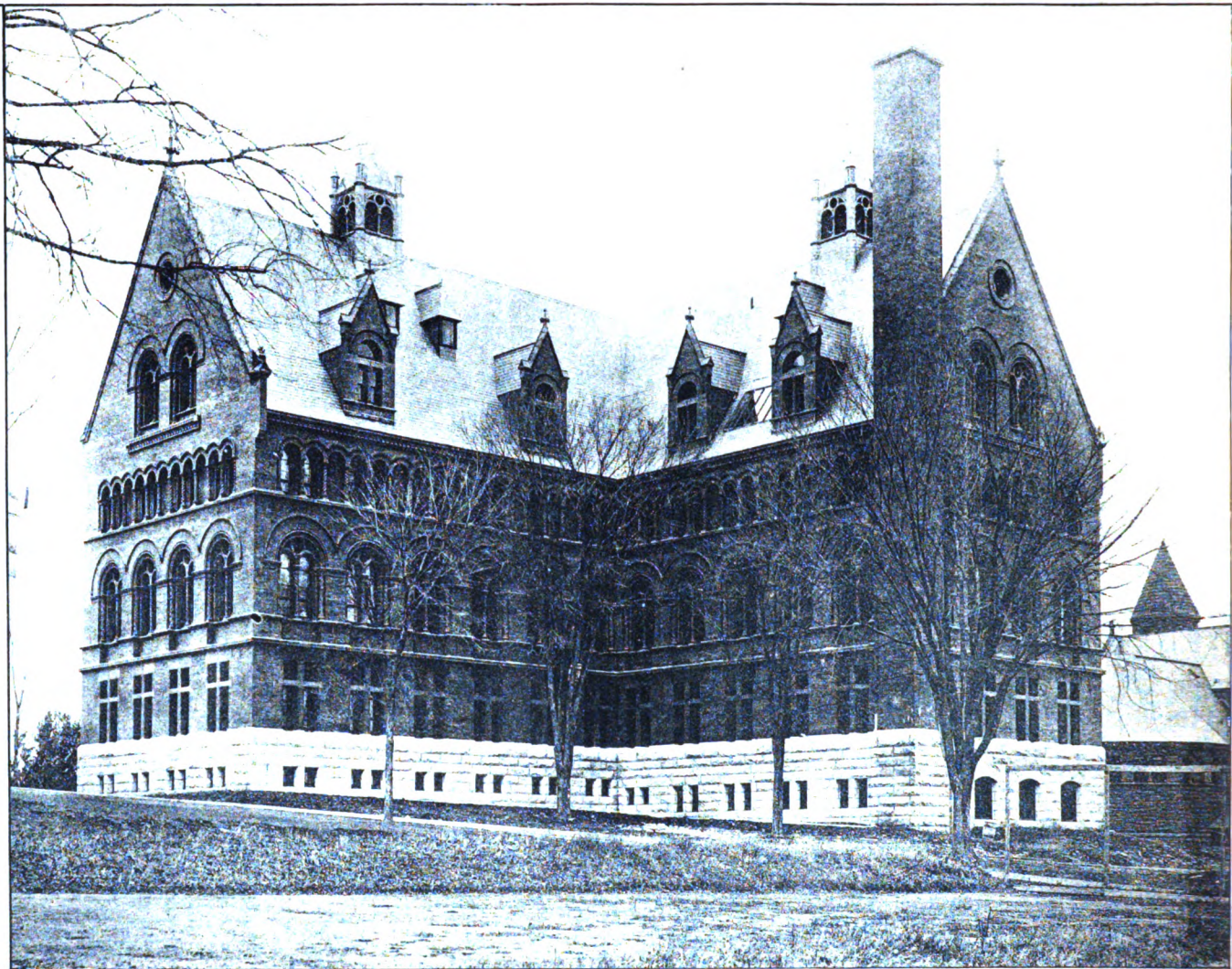
APPRAISERS WAREHOUSE  
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H. W. Martin, Jr.,  
Superior Architect  
THE ASSOCIATED ARCHITECTS

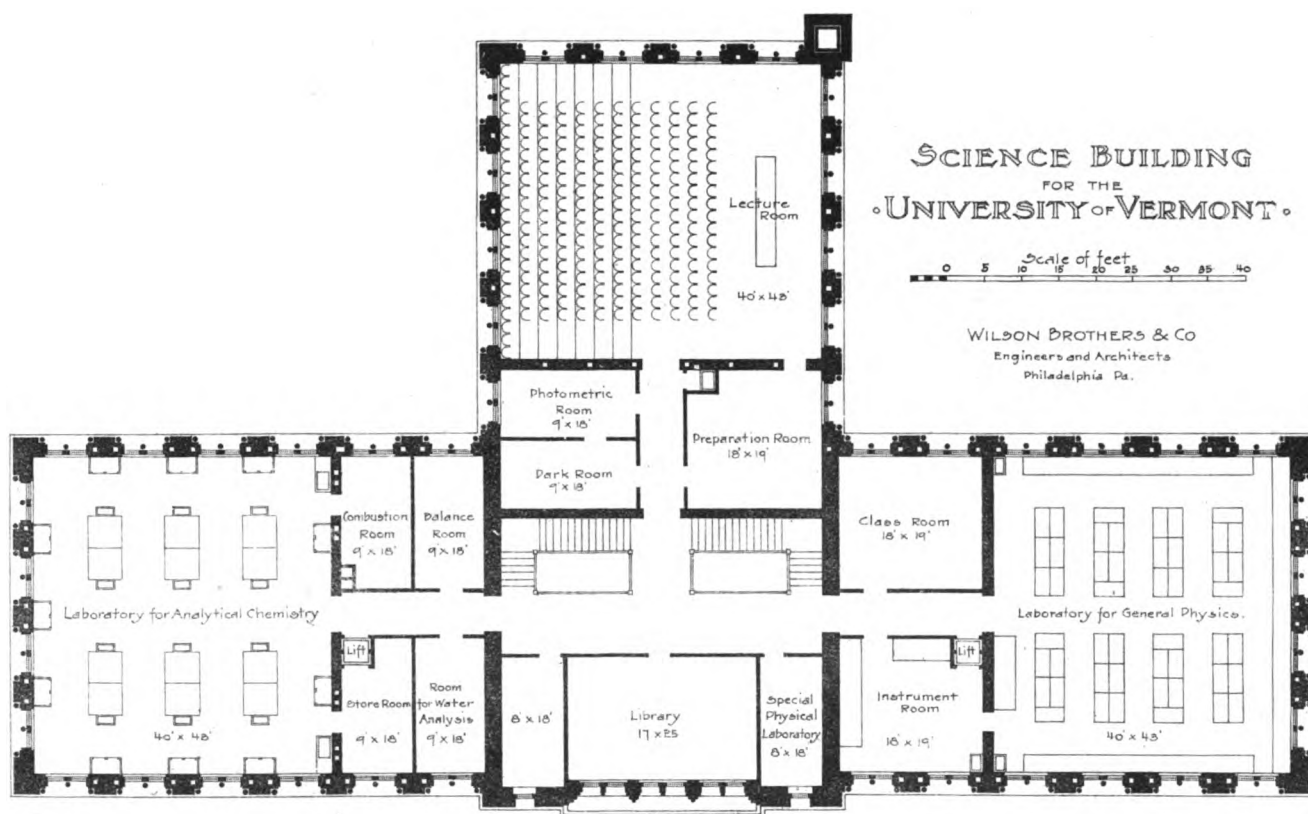
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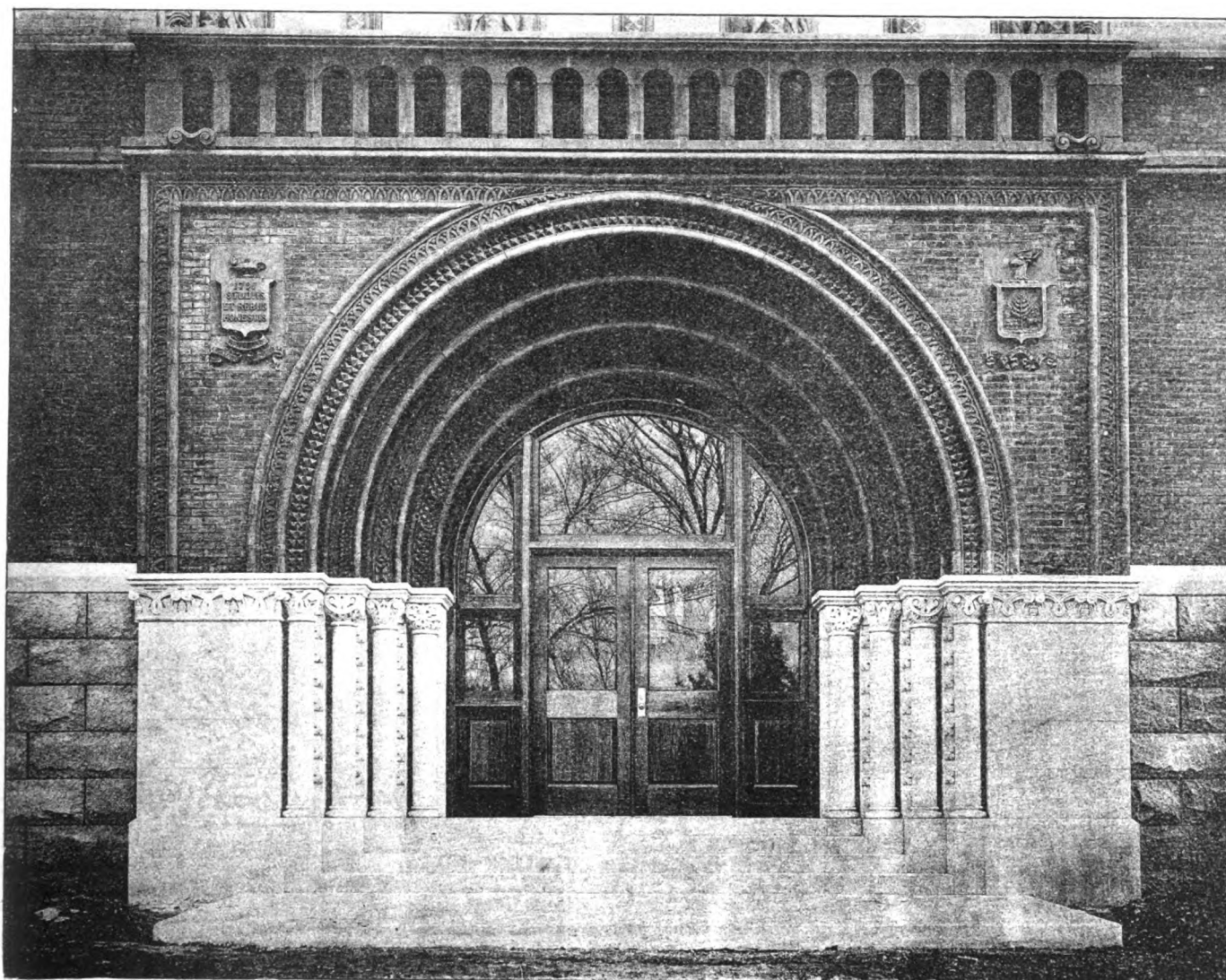






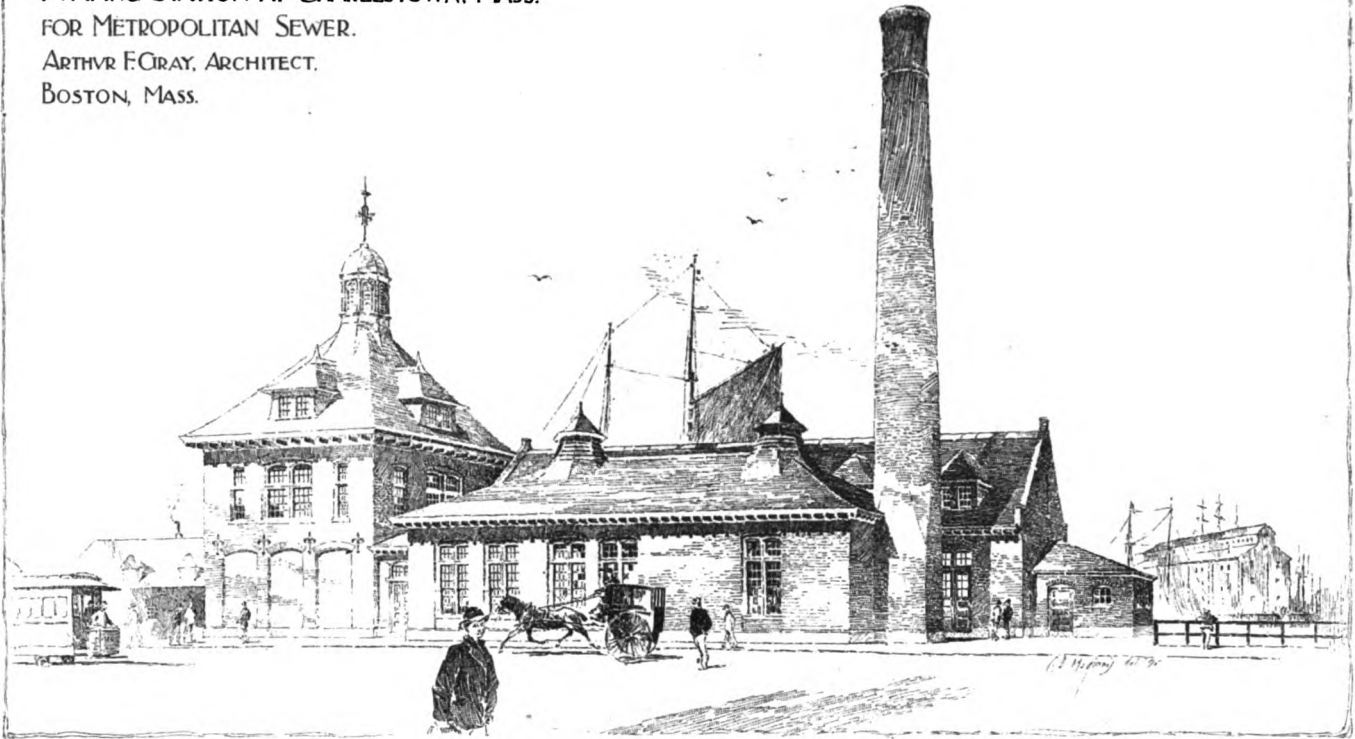


SECOND FLOOR PLAN.

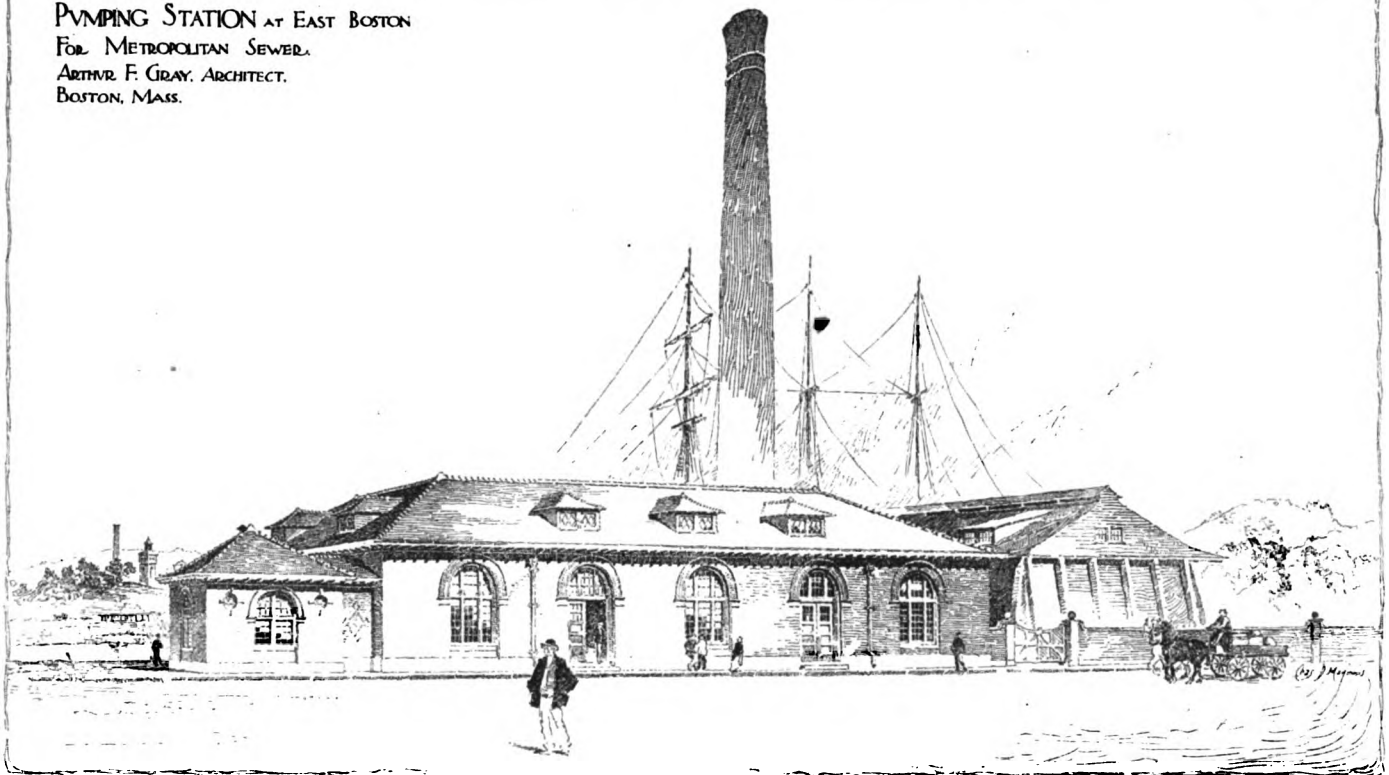




PUMPING STATION AT CHARLESTOWN, MASS.  
FOR METROPOLITAN SEWER.  
ARTHUR F. GRAY, ARCHITECT.  
BOSTON, MASS.



PUMPING STATION AT EAST BOSTON  
FOR METROPOLITAN SEWER.  
ARTHUR F. GRAY, ARCHITECT.  
BOSTON, MASS.



ELLIS TYPE PRINTING CO., BOSTON





nearly five miles distant, and that traces of it are still visible, but I am slow to believe the story, the valley which separates them is so vast, and Italians are such artful liars.

On the first floor we entered a great *salon* with pilastered walls and lofty vaulted ceiling. Three noble arches admitted to the loggia which commanded a view of distant Siena, the intervening valley and the surrounding hills. At a table in the centre of this chamber—once, no doubt, the gathering-place of one of the most brilliant and intellectual societies the world has ever seen—sat two peasants in their work-day clothes drinking wine and eating bread and meat, and sharing it with a homely, sociable dog.

In them and their environment I saw a symbol of modern Italy—a pauper which inhabits still the dismantled and decaying churches and palaces reared by the Renaissance, intent upon the sordid meal-eating, money-getting present, forgetful of the past which made her glorious, though mindful of the past which made her free.

CLAUDE FAYETTE BRAGDON.

[To be continued.]

## ELEVENTH ANNUAL EXHIBITION OF THE ARCHITECTURAL LEAGUE.

THE general effect of this year's exhibition adds another to the list of successful efforts of the hanging-committees. Since the League has enjoyed the use of the galleries of the Fine-Arts Building, especially, they have succeeded in improving markedly each year, in their efforts to get an interesting and at the same time an orderly effect out of the rather heterogeneous materials sent them.

The only criticisms that can be offered is the covering of the walls of the entrance vestibule with a necessarily confused mass of architectural renderings. As this is the only entrance to the galleries, it seems a mistake to invite the public to stop at a point where, when even a very small number of visitors are entering and leaving, those stopping to examine drawings would congest the approaches to the galleries, the coat-rooms and to the second story.

The walls of the vestibule *might* be used without this unfortunate result, by using them for two, or possibly four, especially meritorious works, guide-posts, as it were, to the character of the exhibition inside; but such exhibits should be carefully chosen for generally striking characteristics, and their scheme or purpose should be obvious and direct; exhibits for this hallway should not be of the kind that lead the visitor to stop and search the catalogue (finding in this year's, at least, that they are not in it) or linger over intricacies or charms of detail.

Having adverted to this, *en passant*, rather as a suggestion which may bring about its more careful consideration at future exhibitions, let us pass on to the Vanderbilt Gallery, where most of the architectural work is exhibited.

The general character of the architectural work exhibited is good, and looking back through the past twenty years, no one, certainly no architect, can fail to be widely impressed with the strides made by the profession and by the public. From the epoch (1876) when the people at large were building country houses either with a mansard roof, or in the Eytalian style with scroll and ornaments, and architects were only employed in very exceptional cases, to the present time when we get in one League exhibition such designs as Mr. Hunt's "Biltmore," Robertson's "House on the Rocks" (presumably W. Seward Webb's place at Shelburne, Lake Champlain, and apparently more extensive than Biltmore), Carrère & Hastings's design for Mr. E. C. Benedict, at Indian Harbor, with a layout of the grounds reminding one of a "*projet de Grand Prix*," and seventy-five or one hundred more, where men of great ability exhibit designs for many very interesting and very charming country places that vary in their cost from \$100,000 or more to the modest \$4,000 or \$5,000 home, what a contrast to one who can look back over those twenty! It certainly shows on the part of the profession at large a tremendous capacity for improving the opportunity; for keeping in the van of improvement in matters of art and taste, where their competitors (their clients) are people of abundant leisure and culture. The improvement in style, the working out of detail, the development and fostering of all the allied arts, landscape-gardening, painting, sculpture, carving, weaving, ironwork, modelling—all means a steady purpose, an unwavering enthusiasm, a daily and hourly labor on the part of the profession at large; it comes as near living a life of art for art's sake as can be found this side of the Italian Renaissance.

I have purposely referred above to country places only as they seem to mark more clearly and emphatically the tendency and the improvement. We have made, as shown clearly in this exhibition, the same general advance in many other directions, in private city residences, clubs, in certain classes of investment buildings, in college buildings and hospitals, and in one direction where success promises to have the greatest and most powerful influence for the good both of the profession and the community, in public buildings.

The only discouraging spot is in the *m-tty*-story buildings where practical needs, steel skeletons and outward shell are still hopelessly at variance.

To come back more directly to this Eleventh League Exhibition, which forces the contrast with the past so strongly upon one, the same arrangement has been adopted that was inaugurated last year, of forming alcoves by projecting screens, and devoting each alcove, as far as may be, to some firm or group of men. The saddest

feature this year is that two alcoves are memorials to four men, each one a serious loss to the profession: the oldest, Mr. Hunt, not really old; Mr. Atwood, in the prime of life; and Mr. Page Brown and Mr. Stewardson, both young men whose life-work had been but brilliantly begun.

The work exhibited in their memory is necessarily scant and fragmentary, but the school *projets* of Mr. Hunt and his working-drawings for the Louvre are full of interest, whilst a few drawings or reproductions of drawings of the others are very characteristic of the individual methods and will be seen with pleasure by all who knew them. Deserving of special mention are Atwood's competitive sketch for the Fine-Arts Building at the Chicago Fair, Page Brown's reproduction of a water-color of a Newport house (not built, unfortunately) and Stewardson's color-sketch of the east entrance tower of the dormitories for the University of Pennsylvania.

The country work this year is rather meagre, as compared with ordinary years, and there is nothing especially notable to record in the exhibits. Mr. Hunt's work is not worthily shown, although the photographs of such work as is exhibited are well chosen and admirable in execution; perhaps the committee thought his work well enough known through other publications and general knowledge. Mr. Robertson's "House on the Rocks" is rather archaeological than architectural; no doubt the plan, not exhibited, is modern enough, but why an architect of Mr. Robertson's experience should wish to choose the English or Scotch castellated style, then put flat tin roofs below the level of all his battlements, and then exhibit a *bird's-eye* view, Mr. Nye being dead, we shall never discover, unless it is when Mark Twain returns from Australia. Carrère & Hastings's house at Indian Harbor is good, although it savors a little too strongly of the "*projet d'Ecole*." I believe as firmly as any one can in the value of Beaux-Arts training, but any one who has compared the Grands Prix in either painting, sculpture or architecture, with the subsequent work of the winners, will understand the danger of limiting one's aspirations to the ideals of the school age. Any *nouveau* with Messrs. Carrère & Hastings's opportunity *might* have remembered a charming *esquisse-esquisse* by Lebreque, February, '67, for "*un exedre joint à une salle de billard*," and with the beautiful promontory of Indian Harbor as his subject, have felt impelled to realize Lebreque's composition. I don't believe Carrère & Hastings remembered it or used it, their problem was so different a one, but I do feel that the atmosphere of their office is at times too Beaux-Arts for Indian Harbor, when their own individualities on top of their training are all that is necessary. Their design is very good and very interesting, is suitable and fit, and their general plan of gardens, piers, stables, etc., landscape-gardening and all, a most admirable conception, and marking an epoch in such matters. The only criticism of detail suggested is that the Palladian motive in the second story seems a bit thin and meagre, but that is not a fair criticism on a first sketch from an office that studies its work, as they do, from beginning to end. Rossiter & Wright have several good things in country work, notably a bowling-alley and billiard-room sketch for a Water Witch Club, which is charming both in conception and in its rendering, with a judicious use of *gouache* on grayish paper.

C. C. Haight has a series of very charming little houses in the Shinnecock Hills; F. E. Wallis has a sketch for a modest stone country-house showing a very considerable ability in handling his masses, and another more important house in the entrance corridor; both show a broad treatment of water-color work, which is admirably adapted to architectural sketches, and is to be commended as drawing a fair and honest line between the exaggerations of certain clever draughtsmen whose work bears no relation to the executed building, and the other extremists, who having no imagination and much skill, over-realize, if it may be permitted to coin a word. It would be well for the younger men to study Mr. Wallis's methods with care and try to catch his spirit—not necessarily his particular knack. Berg & Clark; Dehli, Chamberlin & Havard, and C. P. H. Gilbert may also be mentioned as having done some country-houses well worth looking at. The best interior, by the way, is of a Mrs. Hewitt's residence, Cambridge, N. Y.; F. R. Comstock, architect; G. N. Kutchins, delineavit.

Coming to town houses, there seems to be a dearth in this exhibition, outside of Carrère & Hastings's front elevation of a house for Mr. Sloan, Butler & Dubois's design, and a slight sketch in pen-and-ink of a part of a house by G. P. Fernald, which is one of the best bits of pen-and-ink in the exhibition. As showing the colorist gone wild and overwhelming the architect's composition, one might study No. 165, a house on Commonwealth Avenue by J. A. Schweinfurth. If any Bostonian ever saw a house, a grass-plot and a lady on Commonwealth Avenue that actually gave him the impression of this drawing, he would leave at once, and go, who knows where—to Philadelphia, or the north of Scotland. The impression made on Boston by the Neo-Grec Martin Brimmer house when it arose on Beacon Street was not in it, could such color-effects as Mr. Schweinfurth's be built and made to stay; and yet, his design for the Minnesota State Capitol, as far as the perspective goes, no plan being given, is one of the best of the several exhibited.

There is not a good store or office-building exhibited; those of moderate height are simply commonplace, those that aspire to from eleven to twenty-two stories are each worse the one than the other. Some day this problem may be solved architecturally, but up to the present time no one of the tall buildings is architecture. Mr. Haight's

Lawyers' Title Insurance Co.'s Building is one of the most satisfactory, but the streets are so narrow you can't see it near by, and its neighbors are so tall you can't see it from a distance. Kimball & Thompson's Manhattan Life Building seems to be the next most successful, and barring too much detail of balconies and arches in the front and an insufficient allowance for perspective in the crowning motives, whereby small domes that were to have supported the central feature and carried the sky-line up easily, disappear from view at ordinary distances and can only be seen from Hoboken, it might be held to have solved the problem in one good way. Bruce Price came very near to a good solution in the American Surety Building, but it is very evident that his detail, especially at the top, does not count as from his drawings he thought it would, and starting from what seems the soundest idea for such monsters, an interesting basement, a plain shaft punched with holes for windows and a good and rich crown or sky-line, he lost the courage of his convictions, so that the parts that should be plain have detail enough to hurt the top and bottom richness which, thereby, seems not rich enough.

Of the drawings exhibited this year in this class, W. & G. Audsley are easily the champions in ugliness with their Bowling Green Building, and they hold it also, by the way, in a model exhibited for a half-timbered "mansion," modelled and colored in black-and-white; that Death would not be willing to live in it, is not a bull in this case. The second prize in ugliness in tall buildings can be disputed in friendly competition between Mr. Post, Messrs. Lamb & Rich, Messrs. Berg & Clark, and G. F. Tilden and Mr. Alex. Mackintosh. Mr. Post would probably win, as he has already erected the ugliest building in New York, the *World Building*, and the jury would, therefore, be entitled to disregard his attempt to escape the prize by hiring a clever water-colorist to hide his claims.

Clinton & Russell have several designs for office-buildings which seem rather ineffective in drawing, but which may develop in execution the qualities of good sense and refinement for which Mr. Clinton has been favorably known in that class of work.

The Manhattan Storage Warehouse, Seventh Avenue and Fifty-second Street, by James E. Ware, although shown in a rather poor and meagre sketch, is known as one of the best industrial buildings in the city. It is a great pity that Mr. Ware does not reach the same level of excellence in his less important work.

There are several fragments of competitions, none of them complete enough to enable one to really judge of the respective or actual merits, but their exhibition and the quality of the work in most cases is so good as to add greatly to the general interest and to cheer the profession.

Amongst the more notable are: A. M. Welch for the Philadelphia Art Museum, good scholarly elevation, but no plans; for the Minnesota State Capitol, perspectives and a few plans are submitted (not enough in any case upon which to form a judgment); one by Bruce Price and A. D. Pickering, which is weak in the transition from square base to dome, and the Greek style adopted seems forced; one by J. A. Schweinfurth, good, as mentioned above; one by Ernest Flagg, the plan of which seems weak in general conception; one by Lord, Hewlett & Hull, showing only a ground floor, and making it, therefore, very difficult to judge of the most important features (Assembly, Senate, lobbies, etc.).

Mr. Flagg has the perspective of the Washington State Capitol, now being erected from his designs, and certainly to be a much finer and more scholarly building than could have been secured under the old system of pulls and favoritism, under which so many State Capitols have been built.

McKim, Mead & White are not very well represented in this exhibition, and outside of the line-drawings for the Columbia College Library, which have been very generally published, they have nothing worthy of special comment.

There are, besides some interesting and able sketches of entrances to the New York City Parks by Howard & Caldwell, a plan of theirs for the approaches to the Grant Monument, competitive designs for a new tower to the Brooklyn City-hall, recently burned down, which are not very successful, perhaps because the City-hall was not burned down also, and that therefore Messrs. Lord, Hewlett & Hull and Messrs. Griffith, Stoughton & Stoughton were unduly handicapped. Competitive designs for the New York Athletic Club form an interesting series—Howard & Caldwell, Dodge & Brown, Wells & Bates, R. L. Daus, F. A. Moore, and Marsh, Israels & Harder are represented, whilst the successful competitor is not. Marsh & Co.'s design was predated, Howard & Caldwell's perspective seemed very good, and Mr. Daus's plan seemed to distinguish itself and its skeleton construction by allowing the partitions on each floor to be entirely independent of those either above or below.

There are few church designs exhibited and none that are particularly notable. Messrs. Brunner & Tryon are perhaps the most startling, in giving a Jewish synagogue in purely Classic style, very like the Bowery Savings Bank in general composition, and a very good English Gothic country church; deserving passing mention are the Shepard Memorial Church, by Haydel & Shepard, in a late French style and glowing inwardly with all the possibilities of marble and mosaic and color, and a Methodist Church front in the city, by W. B. Bigelow, which is intended to express the opposite tendency, the meeting-house in its strict significance.

H. J. Hardenbergh has an alcove to himself and also the hotel

business, as far as this exhibition is concerned. His designs raise principally the question in one's mind whether four times as much Waldorf will be four times as impressive, or whether, like some vulgar fractions, the multiplication may not have the opposite effect. Whatever the result, it is not his fault, but that of his clients, and, as I hope to show when speaking of the allied arts, Mr. Hardenbergh has done an immense amount of good in fostering intelligently and in the best spirit, that coöperation between architects, artists and handicraftsmen which we believe to be essential to true live work. Messrs. Renwick, Aspinwall & Owen also have an alcove practically to themselves; to quote Joseph H. Choate, who is said to have said it apropos of some one else, "They show a great deal of taste and some of it is good."

Amongst the miscellaneous work worthy of more than passing mention, are the only too few and too meagre drawings of E. P. Casey, who has been working out the details, and especially the interior work, and the decoration by paintings and sculpture in the Congressional Library under his father, General Casey, to whom Congress entrusted the work of executing the designs of Messrs. Smithmeyer & Pelz. Through the carelessness of the average newspaper reporter, both Messrs. Smithmeyer and Pelz, who designed the Library and began its construction, and Mr. Casey who took up the work when it was about at the first story, and followed their plans as far as they went, have been injured in the eyes of the public by partial statements. It would seem to be clear enough to any architect with a knowledge of the character of the building, growing with the deliberation which characterizes our Government work, that there was ample room for each of the parties to have his due share of praise. The plan is generally recognized to be one of the best library plans in the world. The exterior is dignified and appropriate. The interior, on the other hand, promises to surpass any of our Government buildings in excellence, and has naturally given to the younger architect abundant opportunity for personal distinction. Whether Congress was wise or right in taking the execution of the Library away from the original designers and entrusting it to the Engineer Corps of the Army does not enter into this particular discussion at all, or in any way affect it.

Bruce Price has a design in the exhibition that is extremely interesting. To give the title, and to add that it is pervaded by a strong Greek feeling as to detail, and is carefully studied, well-balanced and well-proportioned as to masses, is all that one can say in the limits of a general review. It is "A project for erecting upon the square of a New York City block a monumental Public Library of the capacity of the Boston Public Library." The result seems to be about four hundred feet high.

A design by Cady, Berg & See, for a gateway to the Yale Campus, must close this review of the architectural part of the League Exhibition. Harvard cannot always have her own way in athletics (not often, one might say nowadays), but she need not feel uneasy lest her gateways be surpassed, and yet the design above mentioned is a very good second.



#### T-SQUARE CLUB OF PHILADELPHIA.

THE regular meeting was held on the 19th inst., and was anticipated with much interest owing to the new business announced for discussion, and also because of the novelty and romantic attractiveness of the problem in design.

Those who are familiar with Mr. Henry B. Fuller's delightful work, "*The Chevalier of Pensieri-Vani*," would at once perceive from the T-Square Club's programme that the author of the competition had attempted to lay down conditions similar to those existing in the cosmopolitan atmosphere of Arcopia—the ostensible locality of the Chevalier's *dilettante* home.

Of the seven competitors, three failed to finish their designs, thereby leaving the field to the other four.

"A Sea-wall, Stairway and Landing" was the subject of their efforts and resulted as follows:

Lloyd Titus's well-rendered graded-wash drawings secured First Mention. His semicircular stairway, sweeping around the sides of a fountain which formed his central *motif*, was criticised for the lack of continuous circulation in planning; the abruptness of his turn on the lower platform being very unfortunate, his terrace wall was divided off by a number of niches which were too evenly spaced and not high enough up to show off the wall to a good advantage. Nevertheless, the character of his scheme was very appropriate. The design awarded Second Mention was by Albert Kelsey, the plan showing a coved wall cut into the shore and having two belvederes jutting slightly out into the sea, either side of this indentation.

Under his upper stair-landing was a vaulted boat-house. A very careless section-drawing and his unfinished plan detracted from the scheme which was rendered in bright colors. His belvederes were considered out of proportion to the sea-wall, and his statuary was very inappropriately introduced.

Chas. Z. Klauder's Third Mention design was rendered beautifully. His stairway was very gracefully curved and framed-in a niched fountain without suggesting a forced appearance.

Storage-room for small pleasure-boats under the terrace wall, and two sheltered basins for them in front of it, were provided. His central motif was a very rich entranceway between two columns and a pylon each side, surmounted by a figure holding a flambeau.

The whole design was criticised for its stern dignity and public character.

The fourth design was entirely different from any of the others, the conception being grand, although less suitable for the purpose as some of the others. It had a long peristyle, with a very wide stairway leading straight down to the water. The central pavilion was thought to be weak and unnecessarily encumbered by interior columns, and although A. B. Lacey's design showed a treatment of shrubbery which displayed the architectural features to good advantage, yet it was not calculated to diminish the hugeness of his conception.

Under the head of "New Business," notice was given of an Amendment to the Constitution, changing the election of officers from October to April, so as to allow the incoming officers time between their election and inauguration to prepare their year's work.

The notices sent to members asking them to name five of the most inappropriate buildings in Philadelphia were very generally replied to, but owing to such a wide diversity of opinion, it has been as yet impossible to classify the result obtained. This inquiry by the Executive Committee was the result of the offer of a medal for a series of years by a gentleman interested in the development of better architecture for Philadelphia; the idea being that a competition should be held during the summer months to re-design the structure chosen from the result of this inquiry.

The Stewardson Memorial Committee reported reasonably successful results.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

LADIES' PRIVATE DINING-ROOM: METROPOLITAN CLUB-HOUSE, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

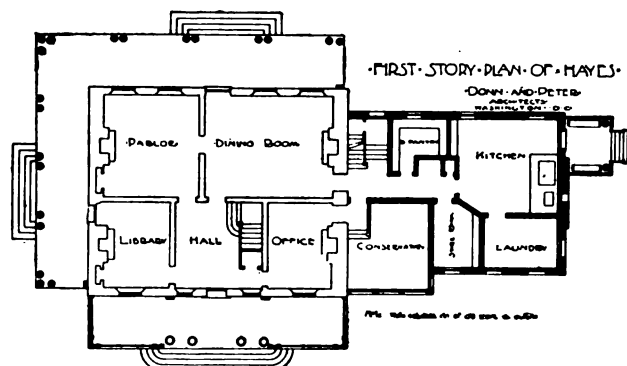
[Gelatin Print, issued with the International and Imperial Editions only.]

SCIENCE BUILDING: UNIVERSITY OF VERMONT, BURLINGTON, VT. MESSRS. WILSON BROS. & CO., ARCHITECTS, PHILADELPHIA, PA.

THE illustrations represent the Science Building of the University of Vermont, recently erected and presented to the University by Dr. Edward H. Williams of Philadelphia, and now being completely furnished and fitted up at his expense, for chemical and physical work. It stands between the Billings's Library (the gift of the late Mr. Frederick Billings, and one of the late Mr. Richardson's best designs) and the old college building, on the former site of the old library building, which was removed to make room for it. The plan shows the arrangement of the second story which gives the key to the building and from which the other plans may be inferred. The dimensions are 175 feet front by 106 feet deep, and the stories are about 15 feet high. The construction is fireproof and very substantial. The exterior is of red brick and terra-cotta above a granite basement; and the interior is of brick throughout, without plaster. The floors are all of cement-concrete and iron, finished on top with cement, except in the chemical laboratories, where Neufchâtel asphalt is used. The builders were Messrs. Stacy Reeves & Sons, of Philadelphia.

ADDITION TO "HAYES." MESSRS. DONN & PETER, ARCHITECTS, WASHINGTON, D. C.

THE main building of "Hayes," the country seat of Mr. G. T. Dunlop, was erected in the latter part of the last century, and was



originally intended as a parsonage for Rock Creek Parish. The walls are unusually thick, and the bricks are larger than those of to-day, while the front and rear walls show all headers, many

of which are quite blue, which adds a great deal to their beauty. The addition was designed to give a few more bedrooms, as well as to do away with a kitchen which now stands on the spot it is to occupy, and was built at a much later date than the main part of the house, and is anything but an ornament to it.

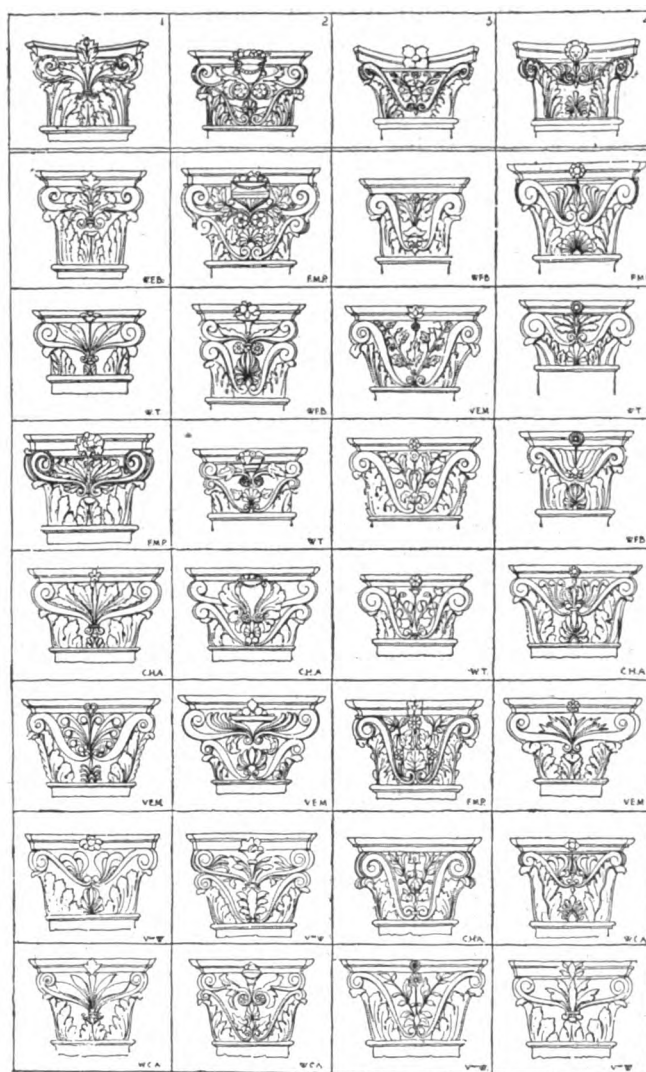
APPRAISERS' WAREHOUSE, NEW YORK, N. Y. MR. WM. MARTIN AIKEN, SUPERVISING ARCHITECT OF THE TREASURY DEPARTMENT, WASHINGTON, D. C.

THE amount already expended on this building including the contracts let foots up about \$1,172,000, a sum which, of course, includes the cost of the site. Although the building is unfinished, it is already found that it is not large enough to meet the increased requirements.

PUMPING-STATIONS FOR THE MAIN SEWERAGE SYSTEM AT EAST BOSTON, MASS. AND CHARLESTOWN, MASS. MR. ARTHUR F. GRAY, ARCHITECT, BOSTON, MASS.

# DESIGN BY DESCRIPTION.

THIS plate illustrates the paper by Prof. William R. Ware upon the "Teaching of Architectural History," printed in the November number of the *School of Mines Quarterly*. The four drawings of Italian pilaster capitals, shown at the top of the cut, were, as was



explained in that paper, carefully described to a class of architectural students in the School of Mines, and the sketches that follow were made by them according to their own conceptions, without further recourse to the originals. This print is made from tracings of their sketches.

[The following named illustrations may be found by reference to our advertising pages.]

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. VII: LA MAISON DU SEIGNEUR AT THE TRIANON, VERSAILLES, FRANCE.

PALAZZO FARNESE, CAPRAROLA, ITALY: DECORATIONS OF THE VAULTED CEILING OF THE SALA DEI LANIFICII.

PALAZZO FARNESE, CAPRAROLA, ITALY: CEILING ON THE GROUND FLOOR BELOW THE HALL OF ANGELS.

A GROUP OF URBAN CHURCHES.

## [Additional Illustrations in the International Edition.]

THE SOUTH LOUNGING-ROOM: METROPOLITAN CLUB-HOUSE,  
FIFTH AVE. AND SIXTIETH ST., NEW YORK, N. Y. MESSRS.  
MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.  
[Gelatine Print.]

THE view that was published under this title in our issue for Jan-  
uary 11 really represented a lounging-room, in the same building  
known by another title.

THE LIBRARY IN THE SAME CLUB-HOUSE.  
[Gelatine Print.]

MANTEL-PIECE IN THE SAME LIBRARY.  
[Gelatine Print.]



[The editors cannot pay attention to demands of correspondents who  
forget to give their names and addresses as guaranty of good faith;  
nor do they hold themselves responsible for opinions expressed by  
their correspondents.]

## NOTCHED AND BUILT BEAMS.

TERRE HAUTE, IND., February 20, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—The writer was much interested at the time, in the  
discussion which took place through the columns of your valued  
paper in the spring of 1890, concerning the proper position of an  
ordinary notched or built-  
up wooden girder. Es-  
pecially since coming into  
possession, some time after,  
of a copy of Mr. L. DeC.  
Berg's "Safe Building,"  
has he had a desire to test  
in a practical way a matter  
upon which authorities  
seem to differ so radically.  
The opportunity, however,  
did not present itself until  
some few weeks ago. At  
that time while engaged in  
making a series of tests of  
small model beams of differ-  
ent woods, a model notched girder was  
made and tested for deflection  
in the two positions. The results, which may be of some  
interest, are herewith given.

The model was of white-pine 1½" x 2" in total section, the notches  
being ½" deep. It was placed upon thin steel plates at each end,  
resting upon steel knife edges 3' apart. Known weights were hung  
from a knife edge resting upon a steel plate in the centre of the  
beam. Deflections were measured by means of a micrometer screw  
making electrical contact at the same point. The following table  
shows the loads applied with corresponding deflections for the two  
positions:

Load.	POSITION A.		POSITION B.	
	Deflection.	Total deflection.	Deflection.	Total Deflection.
10.5 lbs.	.0598"	.0598"	.0164"	.0164"
21.0 "	.0613"	.1211"	.0174"	.0338"
31.5 "	.0598"	.1809"	.0154"	.0492"
42.0 "	.0609"	.2418"	.0149"	.0641"
52.5 "	.0611"	.3020"	.0151"	.0792"
63.0 "	.0599"	.3619"	.0150"	.0942"

It is, of course, to be expected that in one of the two positions  
the parts of the girder will act together, approaching, to some  
extent, the rigidity of a single beam of the same size, while in the  
other position they will act independently or simply as two beams  
of nearly half the depth each. According to the well-known  
formula, the deflection in the second or weaker case should be about  
four times that of the stronger. Referring to the table, it will be  
seen that for each load applied, the deflection for case A was very  
nearly equal to four times that of case B. This seems to indicate  
very clearly, that position B is that in which the built-up beam has  
the greater rigidity. This is the position given as correct by  
Clarke's "Building Superintendence" and by Kidder's "Architects'  
Pocketbook," while the opposite position, or A, is given by Mr. Berg  
in "Safe Building." Yours very truly, O. E. McMEANS.

THE ROTCH TRAVELLING-SCHOLARSHIP EXAMINA-  
TIONS.

BOSTON, February 26, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Will you permit me the use of your columns to make  
a statement in regard to the Rotch Scholarship? A change has been

made in the manner of conducting the examinations. The topics  
will be the same as heretofore, but the Scholarship will be awarded  
on the result of the examination in design, the committee, however,  
reserving the right to consider the preliminary examinations, if nec-  
essary, for decision. Furthermore, a candidate who has once passed  
in the preliminary examinations is eligible for admission in the com-  
petition in design in the same or any subsequent year without re-  
examination. The regulations state that the Committee having the  
Scholarship in charge may invite examiners to act with it on the dif-  
ferent subjects but will retain the final decision in its own hands.

The preliminary examinations are to be held April 6th and 7th  
and the sketch-design is to be made on April 25th. Further notice  
of the date of the examinations will be made later.

Yours very truly, C. H. BLACKALL,  
Secretary Rotch Travelling-Scholarship Committee.



BALTIMORE, MD.—The Walters Art Gallery will be open to the  
public on all Wednesdays till May 1, on all Saturdays in April, and  
on Easter Monday.

BOSTON, MASS.—Paintings recently purchased; the Martin Brimmer  
Pictures; Japanese Paintings; Line Engravings, Mezzotints and Etch-  
ings by Rembrandt: at the Museum of Fine Arts.

Paintings from the Paris Salons of 1895: at the Jordan Art Gallery,  
450 Washington St.

Loan Collection of Portraits: at Copley Hall, Clarendon St., March  
2 to 23.

Photographs by Miss Emilie V. Clarkson: at the Boston Camera  
Club, 50 Bromfield St., March 4 to 14.

Paintings by Boston Artists: at the St. Botolph Club, March 10 to 21.

Paintings by Charles H. Davis: at Doll & Richards's Gallery, 2  
Park St., until March 11.

Water-colors of Flowers by Paul de Longpré, also, Bronzes by Edward  
Kemys: at Williams & Everett's Gallery, 190 Boylston St., until  
March 14.

BRIDGEPORT, CONN.—Second Annual Exhibition of Pictures: at the  
Public Library, January 25 to March 15.

CHICAGO, ILL.—Works by Gustave Doré: January 21 to March 21,  
Annual Exhibition of the Cosmopolitan Club: March 10 to 31, at the  
Art Institute.

NEW YORK, N. Y.—Twenty-ninth Semi-annual Exhibition, including Loan  
Exhibition of Early American Paintings, Old English Paintings, and the  
Cullum Collection of Classic Sculptures: at the Metropolitan Museum  
of Art.

Eleventh Annual Exhibition of the Architectural League: at 215 West  
57th St., February 15 to March 9.

Paintings by Henry Mosler: at the Avery Galleries, 368 Fifth Ave.,  
until March 7.

Pictures by J. B. Jongkind: at the Durand-Ruel Galleries, 389  
Fifth Ave., March 7 to 21.

PROVIDENCE, R. I.—Exhibition of the Providence Art Club: opened  
March 4.

WASHINGTON, D. C.—The Art Gallery of Thomas E. Waggaman  
will be open to the public on Thursdays during March and April.



HOW SCULPTORS' FRAUD ENRICHED THE ENGLISH LANGUAGE.—The  
origin of the word "sincerity" is profoundly interesting and sugges-  
tive. When Rome flourished, when her fame was spread the world  
over, when the Tiber was lined with noble palaces built of choicest  
marbles, men vied with each other in the construction of their habita-  
tions. Skillful sculptors were in request, and immense sums of money  
were paid for elaborate workmanship. The workmen, however, were  
then guilty of practising deceitful tricks. If, for example, they ac-  
cidentally chipped the edges of the marble, or if they discovered some  
conspicuous flaw, they would fill up the chink and supply the deficiency  
by means of prepared wax. For some time the deception would not  
be discovered, but when the weather tested the buildings the heat or  
damp would disclose the wax. At length those who had determined on  
the erection of mansions introduced a binding clause into their con-  
tracts, to the effect that the whole work from first to last was to be  
sine cera—that is "without wax." Thus we obtain our word sincerity.  
To be sincere is to be without any attempt on our part to mislead, mis-  
represent, deceive or impose on another; to be, and appear to be,  
what we are; to say what we mean, and mean what we say.—The  
Churchman.

GAS FROM SAWDUST.—The town of Deseronto, in Canada, where  
there are several large lumber mills, is partially lighted by gas from  
sawdust. The sawdust is charged in retorts which are heated by a  
wood fire, the gas from the retorts passing into a series of coils, and  
thence into the purifiers, which are similar to those used for coal-gas.  
Lime is the principal purifying agent employed.—Cincinnati Commer-  
cial-Gazette.



Entered at the Post-Office at Boston as second-class matter.

MARCH 14, 1896.



**SUMMARY:—**

Bills before the New York Legislature on: the Inviolability of existing Projections over the Lot Line; the Exclusion of Imported Materials from Municipal Paving Contracts; the Licensing of Masons and Builders.—The Joint Committee of the Boston Associated Board of Trade and its Work.—Proposed Reorganization of the Boston Department of Buildings.—The Right to Sign a Funerary Monument.—The Signing of Buildings. . . . .	113
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The Pulpit in the Old Meeting-house, Sandown, N. H.—Entrance Doorway and Details of the Same Building.—The West Church, Boston, Mass.—Side Elevation of the Same Building.	
Additional: Villa of M. Henri Parent, Architect, Vaucresson, Seine-et-Oise, France: Entrance Façade.—The Studio Façade of the Same Building.—Another View of the Main Façade.—Convalescent Home for Fifty Beds, Llanfairfechan, North Wales: Two Plates. . . . .	122

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SOME day an interesting volume may perhaps be written on the inner history of New York legislation. Two bills have just been brought forward in the Legislature which suggest such inner history, besides being of importance to the building world in other respects. The first of these, which is introduced by Senator Lexow, provides among other things, that "If a structure or part of a building now standing in the city, known as a bay-window or oriel window, shall extend not more than eighteen inches upon any street, avenue or public place, said structure shall not be removable unless an action or proceeding shall be instituted by or in behalf of the Mayor, Aldermen and Commonalty of the City of New York for its removal, within one year after the passage of the act." The explanation of this proposed legislation appears to be that, although no statute has ever given authority to private owners to project bays or oriels over the street-line, the Board of Aldermen has often, in times past, granted permission to do so, and the bays have been built accordingly. Now, experienced residents of New York are aware that it has, at times, been the ingenious practice of Aldermen to give permits for violations of the law of this sort, and a year or two afterwards, to be seized with compunctions of conscience, and doubts about the legality of their action, which could only be appeased by handsome contributions of money on the part of the owners of structures erected in accordance with such permits. So long as these structures stood, the aldermen were liable to these fits of remorse, which only cash could assuage; and Senator Lexow's bill seems really, though not avowedly, to be intended, not only to relieve the owners of such oriels and bays, after the lapse of a year, from all fear of further proceedings on account of them, but to cut off a source of supply from which the worst elements of the corrupt municipal government drew a very substantial income. Both these are worthy objects, and it is to be hoped that the bill will pass.

THE other bill is, we fear, less praiseworthy in its objects. It provides, in brief, that "Except for repairs, no asphalt, wood or other pavement which shall be wholly or partly composed of foreign productions or materials, shall be laid or used in any street, avenue or other public thoroughfare in any city, county, town or village of this State." To the ordinary observer, this looks simply like the manifestation of a violent attack of Chauvinism upon the author of the bill; but people who know something about the asphalt business will look deeper. These people know that nearly all the asphalt used for paving in this country is composed of "foreign produc-

tions." The best pavements of the sort are laid with rock asphalt from Seyssel or the Val de Travers, in the French Jura; some are made with an inferior rock asphalt from Germany; but by far the larger part are laid by an American company, with an artificial compound, made by mixing sand and gravel with asphalt from the famous Pitch Lake, in the Island of Trinidad, over which, we believe, the American company holds exclusive control, by virtue of a concession from the English Crown. Quite recently, a mineral pitch, similar to that of Trinidad, has been found at Bermudez, in Venezuela, and a company has begun to import and use it in competition with the Trinidad asphalt; but its business is, as yet, very restricted. This, with the addition of a Sicilian rock asphalt, similar to that of Seyssel, but not much known here, completes the list of the foreign asphalts which the so-called Featherson bill seeks to exclude from the State of New York. Of the native asphalts which it proposes to substitute, under compulsion, for the foreign product, very little is known. Kentucky produces, in quantities as yet very limited, a good rock asphalt, similar in appearance to that of Seyssel, although the pitch in it is said to be mixed with silicious sand, instead of the limestone of Seyssel or the Val de Travers. California also produces an asphalt, which has been used rather extensively on the Pacific Coast; and an asphalt from Utah has been employed for pavements in Chicago and Minneapolis. All these native asphalts, although probably good if judiciously used, need, in order to fit them for paving material, a long series of experiments, like those which have made the Seyssel asphalt, as laid in Paris, the best pavement in the world, and have brought the artificial asphalts, made from Trinidad pitch, from a very poor paving material to a very good one. The bill, therefore, simply directs that, henceforth, new, doubtful and almost untried materials shall be used in place of those which many years of skilful experiment have brought to their present excellence, in paving the streets of all the cities of New York. It is not strange that the paving-contractors see in it simply a manoeuvre of the combined interests of the owners of native-asphalt quarries to drive all their competitors out of the field by a single stroke; but it will be strange if the people of New York, to whom good and cheap pavements are of vital importance, permit the manoeuvre to succeed.

A BILL has also been reported favorably to the New York Legislature from the Committee on Cities, providing that, in the cities of New York, Brooklyn, Buffalo, Rochester and Syracuse, no person shall practise as a mason or builder, unless he is duly registered in the office of the County Clerk; and, in order to obtain such registration, he must be a citizen of New York State; must have served four years at his trade; must have passed an examination before a Board of Examiners, and must pay a fee of ten dollars. Violation of this statute is, by the bill, to be punishable by a fine of not less than fifty, nor more than two hundred and fifty dollars, or by imprisonment for a term of not less than ninety days, or more than two years, or both, at the discretion of the Court.

IF this extraordinary bill should become a law, all the masons and builders who live in New Jersey and practise in New York, of whom there are very many; all the builders from other States, who are called on special occasions to do work in New York or Brooklyn, of whom there is a considerable number; all the foreign-born builders who have not been naturalized, including some of the most expert masons in New York; and all the contracting builders who have not served time at the trade, including some of the wealthiest and ablest contractors in the city, will be excluded from all practice in New York. To take a few examples, the great firm of Norcross Brothers, the builders of the Union League Club, the United Bank building, and several others, will be shut out from New York, as neither member of the firm is a citizen of the State; the house of Herter Brothers, the builders of the Vanderbilt palaces, will be excluded from such work, the principals of the firm not having passed four years in laying bricks; and the whole tribe of German masons, who do excellent work for their compatriots in what is not only the largest of American cities, but the third largest German city in the world, will be compelled to suspend business until they have been through the probation required of applicants for citizenship. It is the

last class on whom the proposed law would fall most heavily, and it is to be hoped that they are alive to the danger which threatens them.

IT seems likely that the part in municipal affairs that in Philadelphia and New York has been played by occasional committees of fifty, seventy or a hundred is to be undertaken in Boston by a joint committee, which has been brought into being at the suggestion of the Standing Committee on Insurance and Building Law of the Associated Board of Trade. This first joint committee, which may be supplemented by others of like nature, has been now made up of delegates from the Associated Board of Trade, the Master Builders' Association, the Real Estate Exchange and the Boston Society of Architects, five members from each body. Its permanent function is to watch over legislative action affecting its particular field, so that it may oppose undesirable special legislation, and may support and promote legislation of general public value, and so gradually achieve the position of accepted expert adviser to inexperienced legislative committees. The usefulness of such a body in the way of defeating the many private bills which seek to gain a selfish advantage to their promoters at the cost of public good is incontestable. Such selfish measures are constantly presented for action, but it has been no one's duty to follow up the legislative docket, and the defeat of undesirable measures, when it has been accomplished at all, has been the result of individual action aroused by the attention of some one public-spirited citizen being accidentally attracted to the matter.

AS such a committee, for effective work, must have a fair starting-point and a good base for future operation, this joint committee has brought forward a very important bill which seeks to bring order out of the present chaotic condition into which matters were thrown by the new city charter, the abolishment of the office of City Architect and the consequent distribution of work and duties this change involved. The bill seeks to create a new Building Department, which, amongst other things, unites under one head the duties of the present Department of Public Buildings and the Department of the Inspection of Buildings, the new head of the department, to be appointed by the mayor, to receive a salary large enough to command the service of the best trained and most expert architect, builder or engineer. All assistants, whether heads of special bureaus, inspectors or clerks, are to be appointed by the proposed Building Commissioner only after the applicants, whether present officials or new applicants, shall have passed an examination before a Board of Examiners consisting of three members, one member each, appointed, with the approval of the mayor, by the Boston Society of Architects, the Master Builders' Association and the Boston Society of Civil Engineers. It is needless to say that a body of officials secured in this way should, so far as expert knowledge goes, be highly efficient, probably more efficient than the body which at present administers the building-laws, but the matter of tact, judiciousness and administrative ability cannot be determined by examination, and these important qualifications must be determined by the test of experience. The proposed bill is particular in providing that any of the examiners may be removed by the mayor for "malfeasance, incapacity, or neglect of duty," but does not provide how any other official is to be got rid of. Presumably the ordinary Civil Service rules are to apply, and dismissals can only follow charges properly laid and clearly proved. The Building Commissioner is to be an appointee of the mayor, and as the Commissioner is to appoint, with the mayor's approval, his three chief assistants, the Inspector of Construction, the Inspector of Condition and Use, and the Inspector of Sanitation of Buildings, it seems that these four important chief officials are liable to lose office as a consequence of each annual civic election. It seems to us that this is a weak point in the measure. Still, with the Joint Committee of the Board of Trade looking after the initiation of legislation, the Building Commissioner with his enlarged powers, the Board of Examiners to assure good men in the ranks of inspectors, etc., and beyond all the present Board of Appeal, which is to be continued in existence, it really seems as if building matters in Boston might after July next begin to find themselves in a more satisfactory condition than ever before.

A CORRESPONDENT calls our attention to a case which was heard in the French Courts recently, and which has a certain interest to architects. One M. Wille, a builder, constructed a chapel in the cemetery of Roubaix, and had his

name cut upon it, as a sort of artistic signature. It happens that a local ordinance of the City of Roubaix forbids contractors to insert their names upon funeral monuments otherwise than by initials; while another clause in the same ordinance provides that no inscription shall be placed on any monument until it has been submitted to the Mayor, and approved by him. This curious regulation seems to have been originally intended to check the use of gravestones for advertising purposes, which, in a large manufacturing town like Roubaix, may have been unpleasantly common. However that may be, it was invoked against M. Wille, and he was brought before the police court, and sentenced to pay a fine of one franc, and to have the inscription erased. An appeal was taken from this judgment, and the appellate tribunal reversed it, saying that the ordinance must refer only to epitaphs and mortuary inscriptions, and not to the signature of the author on a work of art; that the police rights administered by the Mayor could have for their object only the maintenance of good order, decency and the public health, and that the Mayor exceeded his powers in forbidding an inscription which could not offend morality, decency or good order. Moreover, it declared the ordinance itself illegal, in so far as it forbade contractors to put anything but their initials on their works, for the reason that such a regulation infringed the rights of artistic or industrial propriety, which could not be encroached upon by a municipal ordinance.

FOR us, this little story serves only to show how sacred the rights of artists are held to be in France. Here, it is hardly necessary to say, such rights are almost unknown. Some years ago, there was a lively discussion in New York over the practice of allowing an architect to mark his work by some sort of signature. The late Jacob Wrey Mould, an artist of great merit, and a manful defender of artistic rights, usually put his monogram somewhere on his buildings, either in the form of an iron finial, or as an interlaced ornament in a panel, much to the disgust of some of his clients, who could not conceive how the person who merely designed a structure could have the audacity to call to mind his relation to it without the consent of the magnate who paid for it. Mr. Mould's view was supported by many of the architects of the city, and some of them had the courage to follow his example, where they were not too much afraid of their clients; but the practice seems to have been abandoned after the death of its most earnest defender, until, now, it is not easy for the architect, even of a public building, to get permission to have his name attached to it. This modern American habit of ignoring the architect of a building is fostered by the newspapers, who finding that architects like to have their names mentioned in connection with their works, are ingenious enough to try to make profit out of this natural desire. We remember a case where an architect was approached by a reporter from a great daily newspaper, who asked for information in regard to a certain public building of some interest, which he wished to "write up" for his paper. After obtaining such particulars as he desired, he inquired of the architect, "How much will you pay to have your name mentioned, as the architect of the building?" The architect declined to pay anything for this valuable privilege, whereupon the reporter, quite unabashed, replied, "Oh, well, the *Hustler* never mentions the architect without being paid." There is much reason to suppose that the *Hustler* is not alone among newspapers in its thrifty view of the subject, and it is not surprising that the recognition of artistic property, which can only be had in public prints by paying blackmail, is not accorded with much ardor by private clients. That art suffers from this ignoring of the artist there can be no doubt. A painter works hard to make his picture creditable to the name with which he is expected to sign it; and, if architects were in the habit of signing their work, their clients would get the benefit of a great deal of artistic study, which the architect knows will be lost on the unappreciative owner, but which he would gladly devote to preparing his work for the eyes of better-instructed critics, if he knew that they had the means of connecting it with him. For this reason, if for no other, the practice of allowing architects to sign their works, if not admitted as a matter of right, ought to be encouraged by all possible means, both by the public and the profession; and we venture to say that the community in which, in this country, it shall first become general will very soon take the lead in architectural development.

## THE MAN ON HORSEBACK!

NOW that the Sherman Statue Competition is about concluded and the important question of its location settled, by a solution equally surprising and satisfactory, it would seem a suitable time for the opening of the whole question *de novo* as to the kind of statues or other public monuments to which the noble spaces and conspicuous sites of the nation's capital should be devoted. It is certainly reasonable to expect that at this stage of our country's growth the monuments erected at public expense and in our public thoroughfares should in some way be an expression of the distinctive national ideals of this republic. Deserving as are the distinguished generals of our army of our monuments and unfading esteem, there is still to be had in view the danger of overdoing, even in the effort to honor them. The effect of the over-multiplication of monuments of any single type can only be to reduce their impressiveness and their value as a tribute. But beside this question of honor to them, there remains the strange incongruity — that must strike the foreign visitor to Washington, who expects to find here, if anywhere, some distinct exhibition of our nation's sentiment and aim; for here, at the capital of a republic that boasts of its diminutive army and its own devotion to the arts of peace, and whose President, at a recent Congress of American Republics held at the capital, remarked to the foreign visitors that "he had held a review of troops in the White Lot only to show them that we have not an army" — that here the only profession that the people care to honor with their monuments is that of war, and that the only achievements worth mentioning or remembering in our national history are those of the battle-fields, either of the Revolution or of the Rebellion.

Are there no victories of peace won by our people during the first century of our nation's life that deserve commemorating at the capital? Is war so predominant a topic in our national life and ambition that the "man on horseback" shall confront our vision at every conspicuous street-corner? I am convinced that no one of our great patriotic generals would say that this was the kind of patriotism for which he gave his life. They did not fight for military glory, nor was it their aspiration to see our nation a great military power among those nations whose main business is war or the prevention of war. And yet, if we were a nation devoted to war and its glories alone, could we do more in the way of monumental honor to this ideal of greatness than we have done already, judging by the predominance here at the capital of military over all other types of patriotic service commemorated in our public statues? In any world's Congress of Nations, were the United States of America represented only by a company of generals of the army in uniform, I believe no one would be more conscious of the incongruity of such a representation than those gentlemen themselves; and yet, here, in the capital city where our republic is, so to speak, on constant dress-parade before the world's eye, we have in our streets and parks two war monuments to every one devoted to service in civil life! A truly fine statue of Lincoln is placed at the far-away end of East Capitol Street and carefully hidden from view by a clump of cedars placed directly between it and the long vista from the street.

Good Ben Franklin, the printer and philosopher, valiantly holds his own on the avenue, despite the approach of the armed riders from all quarters; and in the quiet glades of the Smithsonian some great heroes in the arts of peace are finding their congenial haunts, while Story's beautiful statue of the first Chief Justice at the foot of the Capitol Terrace speaks an eloquent word for the elevated function of the judiciary in our civil system. But in the thoroughfares of our nation's capital, where the stranger-visitor passes up and down every day, the equestrian military statue is already becoming so frequent as to threaten to leave no place for monuments of a different purpose in the future, however much they may be desired, while the monotonous repetition of a single type of monumental art makes this tame and wearisome. Is it strange that one familiar with the beautiful art embellishment of foreign capitals should ask: Where is your National Gallery of Arts? Where are your great national pictures? Where are your walls decorated with the frescos of heroic and romantic scenes of your nation's history and legend? Why are the magnificent terraces and porticos and pediments of your public buildings left vacant of statuary, as if swept bare by a raid of vandals? Where are the groups of your great American scholars, poets, inventors, discoverers, philanthropists and statesmen that should, even by this time, be adorning the fine spaces along the avenue from the Capitol to the Treasury? Where are historical or symbolic monuments of your nation's achievements in transportation and communication that should adorn your General Post-office? Where is Edison group that should stand on the portico of the Patent Office? Where the historians and poets and philosophers to grace the noble approaches to the new Library of Congress? Why are not the great esplanades about the Capitol adorned with symbolic groups representing the marked achievements of the several States of the Union in the advancement of civilization on this continent and the great porticos and sunken gardens of the Treasury and the State, War and Navy Departments relieved of their cold emptiness by statues of eminent civilians or by symbolic representatives and reminders of the development of our trade and commerce? — Is there for all this wide use of commemorative and decorative art no field, no call whatever in the capital of the United States? And are therefore all the conspicuous spaces for monuments to be appropriated one after the other for the generals in the late war? and this, too, in

view of the fact that commemorative monuments are in a manner sacred and cannot be removed at will, like other ornamental structures? Finally, how long will it be before our Government will see that justice to the people demands that this matter of the selection and location of public monuments and the adornment of buildings and grounds belonging to the Government be put in charge of a competent and permanent Commission of Fine Arts. FRANK SEWALL.

SPANISH ART AT THE NEW GALLERY.<sup>1</sup>—II.

FOR the last two hundred years tourists have crowded to see the galleries of Italy and Venice, and have neglected the treasures of the Museo del Prado, where alone the chief works of Velasquez are to be seen at their best. But of late years he has been as one may say "discovered," and owing to the more settled state of Spain and the greater facilities for travelling to that country, it is probable that he will be better known and appreciated in the future, though posterity will marvel greatly, as we do, how it was that this consummate master kept the fire of his genius alive and burning with an ever-increasing brilliancy until he died.

While this exhibition has made us acquainted for the first time with the works of some fine painters hitherto unknown, Velasquez and Murillo are, as they ought to be, its backbone. "The Golden Age of Spanish Art" was that which these masters created and with their lives it ended. The skill born with Velasquez died with him; and though there were followers of Murillo who could imitate his coloring, his composition was beyond their reach.

Diego Rodriguez de Silva y Velasquez was born at Seville in 1599 — the same year in which Vandyke was born at Antwerp.

His father, de Silva, claimed descent from a Portuguese house of royal lineage, while his mother, from whom — in accordance with Andalusian usage — he took his surname of Velasquez, was of a noble Sevillian family. He was carefully educated and early manifested a great love and talent for drawing. Unlike the parents of many distinguished Italian painters who endeavored, but in vain, to beat or nip the budding talents of their sons, those of Velasquez recognized and encouraged his. It must, however, be borne in mind that art in Spain was at the zenith of its glory, and that many of the nobility, while following the fashion set at Court of treating painters with the highest consideration, were themselves celebrated artists. "The Duke of Beja — who hesitated about accepting the dedication of 'Don Quixote' — added the reputation of a good painter to that of a gallant soldier." Indeed, the artistic splendor beheld on all sides by Charles I, when as Prince of Wales he paid his romantic visit to Spain, induced the determination to form a royal collection which he so ably fulfilled after his succession.

The pursuit being thus in no way derogatory to his position as a lawyer, the father of the youthful Velasquez placed him under the tuition of Herrera, but, with all the other pupils, he was soon driven away by the violent temper and severe discipline of this "clever brute," as a writer calls him, not however before acquiring from his master that boldness of handling which results from drawing and painting at the same time. His next master was Pacheco, Inspector of Paintings to the Holy Office, "feeble creature of rules, cold in color and commonplace in conception," a mere theorist in fact. A writer on Spain gives the following translation of an epigram on a painting of Our Lord by Pacheco:

"What have we painted here, Señor,  
So pallid, hard and secco?  
You say it is Divine amor,  
But I say it's Pacheco!"

Disappointed thus in both his teachers, Velasquez formed the resolution, from which he never swerved during the whole of his brilliant career, to adopt nature as his guide, and to this end he kept by him a peasant lad, whose portrait he painted in all kinds of dress, or tatters, or none, and under the influence of every emotion; and in this manner he laid the foundation of that uncompromising realism and admirable truth and feeling that always distinguished him and made him the "King of Portrait Painters." To improve himself in coloring, Velasquez next devoted himself to those studies of still life and low life, known as *bodegones* or kitchen-pieces, so illustrative of his early and somewhat hard, Sevillian manner. We have in the present exhibition an almost unique opportunity of inspecting a few of these works; two of which, "The Water-Carrier of Seville" and "Two Peasants" hang side by side for the first time since they were painted in 1622, more than two and a half centuries ago: a proof of the date and genuineness of these *bodegones* is given by the fact that the same boy appears in each picture.

The former picture, lent by the Duke of Wellington, is famous as having been taken by King Joseph Bonaparte from Madrid. After the rout at Vittoria, his carriage fell into the hands of Wellington with all the jewels, pictures and other rich booty with which it was filled. "The Water-Carrier" and a small gem of a Correggio were returned by the Duke to Ferdinand VII of Spain, who generously presented them to the victor and they have ever since hung on the walls of Apsley House. This "Aguador," 40" x 30", is a composition of three figures: a sunburnt, wayworn seller of water, wearing a brown jerkin, through the tattered sleeve of which we see a

<sup>1</sup> Continued from No. 1052, page 90.

remarkably clean shirt; his huge earthen jars, and two lads, to one of whom he has just handed a large wide-brimmed glass of water, the other boy meanwhile drinking from a mug. Every detail is perfect and realistic to a degree, while the dignity of the water merchant is worthy of a grandee. "The Old Woman and Omelette," as the "Peasants" is also called, is a kitchen scene and represents a woman sitting in front of an earthen pan into which she is breaking some eggs, a boy at her side with a melon under his arm offers her a wine-flask; kitchen utensils are on the table and floor, and a basket with vegetables hangs on the wall. Though cold and subdued, the colors, as in all these kitchen-pieces, blend harmoniously; the canvas is 39" x 46", and is lent by Sir F. Cook. This owner also lends a "Spanish Beggar," a jolly comical-faced toper leaning on a crutch and resting the Moorish looking stone wine-flask he holds, on a globe that occupies one quarter of the canvas. This globe, while appearing transparent, really contains a beautiful landscape in which the spectator sees a group of persons drinking and dancing in front of a *bodega*. It is a little conceit of the painter to delineate what is evidently called up in the half-drunken man's imagination.

It is probable that at this stage of his career, and after a five years' residence in her father's household, Velasquez married Juana, the daughter of Pacheco, of which match Pacheco wrote, "I gave my daughter in marriage, moved by his virtue, purity and good parts, as well as by the hope derived from his great natural genius. The honor of being his master is greater than that of being his father-in-law. I hold it no disgrace that the pupil should surpass the master."

When Velasquez was twenty-three years of age, there arrived at Seville a number of examples of other schools of painting in Spain and elsewhere, the sight of which so roused and gratified his artistic soul, that he determined to visit Madrid in order to see the royal collection. The master whose works made the only lasting impression on him was Luis Tristán, of Toledo, whose style was a combination of Titian and El Greco.

After a brief stay at the capital, where he was warmly received by some fellow-townsmen, among whom was Don Juan Fonseca, a courtier, Velasquez returned home, but through Fonseca's interest with the Count Duke Olivarez, Prime Minister and real ruler of Spain and her sovereign, was shortly recalled by desire of the great man. Velasquez then painted a portrait of Don Fonseca, which being shown immediately on its completion to Philip IV and the assembled court, procured for him the honor of being appointed Painter in Ordinary to the King, at a large salary, to which was afterwards added money for the expense of bringing his family to Madrid.

Now began the long series of royal portraits so numerous as to be confusing, with which all visitors to "Christie's" and other art sale-rooms are familiar. "With his pale Flemish complexion, heavy underlip and sleepy gray eyes, and his long curled moustache, Philip was portrayed under nearly every circumstance of life — even kneeling on embroidered cushions at his devotions, which were punctiliously observed. He spent part of every day in the studio which he had given to Velasquez in the Royal Palace and of which he possessed a key, gave sittings of three hours' duration and occupied his time with this new hobby, and others far more unworthy. In the meanwhile, the interests of the kingdom were left to the power-loving Olivarez, who engaged Spain in long fruitless wars with France, ending in a diminished army and the loss of Portugal.

We do not wonder that Velasquez looks somewhat depressed in his own portrait, when we read that Philip "considered it one of the most sacred duties of a king to maintain a grave and majestic demeanor, was known to have smiled but three times, and reined in his steed with the solemnity that would have become him in pronouncing or receiving sentence of death."

A splendid full-size equestrian portrait, unfortunately lost in a great fire, was the painter's first essay. It was exhibited on the festival in an open space to the admiring public, when Olivarez said, "No one had ever painted the King before," while Philip promised Velasquez that in future he alone should paint his portrait; indeed, he talked of having all those that existed collected and destroyed. This, the first of three equestrian portraits of Philip by Velasquez, was celebrated in verse by all the poets of the day. The Earl of Northbrook lends a small canvas, 23" x 17", formerly in the Rogers collection, said to be the finished sketch of the great picture, under which it used to hang in the Palace of Buen-Retiro (built by Olivarez for himself, but presented by him to his sovereign).

Of the two portraits of Philip by Velasquez in the exhibition, one, lent by E. Huth, is a large canvas, 82" x 49", from the Louis Philippe collection. In this handsome and commanding picture the figure stands life-size and is dressed completely in black; in one hand he holds a paper commencing "Señor," the only bright color introduced being a red tablecover and background. It is identical with and believed to be the original of that in the Museo del Prado, which was probably the work of Juan de Pareja, Velasquez's slave. We have also an earlier portrait from Dulwich College, injured by cleaning and badly hung. Philip, at this time about twenty-two years of age and looking less bored than we usually see him, is superbly attired in a doublet of delicate rose-color with silver embroidery, white silk gloves and a falling collar; in the right hand he holds a baton, and in the left his black hat. In this masterpiece of harmonious coloring, there is great delicacy of technique combined with boldness of outline. Velasquez painted only one other similar to

this in its soft colors — that of the "Infanta Maria Theresa" at the Prado. There are two fine portraits of the first wife of Philip, who was the beautiful Isabel (or Elizabeth of Bourbon), daughter of Henry IV of France, and sister of Henrietta Maria, wife of Charles I of England. The ambassador who conducted this princess to Spain escorted the "Infanta," known as Anne of Austria, to France, to be the wife of Louis XIII, the exchange being made on the same day. Of Isabel's seven children only two survived infancy, namely, her youngest daughter, Maria Theresa, whose portrait is at "The Old Masters' " Exhibition, and Don Baltasar, the only son and heir-apparent, who died aged seventeen. There are four portraits of this prince, the first as a child of two, being amused by his dwarf — with which the Alcazar abounded; a second at the age of seven, looking every inch a prince, is holding a gun and has some fine dogs with him. The third, 39" x 22", depicts him at the age of ten, and is lent by the Queen; it is kept in a room at Buckingham Palace not often seen by visitors. It is said to have been presented by Philip to Charles I and has only recently been brought from a storeroom at Windsor Castle where it had been forgotten. At the sale, in 1651, of pictures belonging to the Commonwealth, "A Prince of Spain" sold for 10s. The last picture of the little prince was painted in 1641, and represents him on a prancing pony, while near him Olivarez (who, among other numerous posts, held that of riding-master to the prince) stands in conversation with two men, one of whom offers him a lance; the King and Queen are looking on from a balcony near. This fine picture, evidently a sketch for a larger one, was painted about two years before the fall of Olivarez.

Portraits of Mariana of Austria are by no means unfamiliar to us all. This Princess, the niece and the second wife of Philip IV, was at a very early age betrothed to Don Baltasar, but as he died in 1646, she was married to his father in 1649, when she was only fourteen. Of her five children one survived and reigned as Charles II.

Returning to Spain with the paintings he had purchased for the King, Velasquez commenced a fine equestrian portrait, of which a model was made in wood and sent to the Florentine Tacca for a bronze statue, which now stands in the Buen Retiro Gardens. A second journey to Rome to purchase more pictures and to make casts of antique figures was undertaken at Philip's own expense. In the interim Innocent X had been elected Pope and to him Velasquez was presented, receiving a command from him to paint his portrait, with which the Pope was so gratified that he gave the artist a gold chain and medal of himself. The Duke of Wellington lends the half-sketch from this, 31" x 27". The Pope, a man of coarse and surly physiognomy, is represented sitting in his arm-chair, on which his white and flabby hands are resting. Every feature of this repellent face tells, whether it be the slight knitting of the brows, the steady look of the shrewd, crafty eye, or the cruel hardness of the mouth, "a mouth that shows a love of life and its good things and of domination." The different reds of the biretta, the cape and the complexion are capitally managed in this truly gorgeous piece of workmanship. Mr. Butler lends a fine copy — probably Italian — of the large completed picture, in which the white lace sleeves and the robe form a fine and startling contrast of color. The original painting, of which Velasquez took many copies back to Spain, was considered by Sir Joshua Reynolds, who saw it in the Doria Palace, to be the finest picture in Rome. Palomino relates that one of the chamberlains, catching a glimpse of the portrait through an open door, advised the courtiers to "speak more quietly, as His Holiness was in the next room"; still more astonishing is the story told of the portrait of Admiral Pareja, now in the National Gallery — which was seen in Velasquez's studio by Philip, who, knowing he ought to be miles away at sea, exclaimed angrily, "Still here! having your orders, why are you not gone?" Getting no response, he saw his mistake and said to the painter, "I assure you I was deceived."

A vivid likeness is exhibited of Velasquez's slave (strangely enough, the same name), Juan de Pareja, who by stealth had become a great painter in the same manner as did Murillo's mulatto, by watching his master and listening to the instructions given to his pupils. One day Philip noticed a picture turned to the wall and asked who had done it, when the slave throwing himself at his feet begged his protection, on which the King turned to Velasquez and said, "A painter like that ought not to remain a slave." Pareja, kissing the royal hand, arose a free man and, becoming a pupil, never left his master. The portrait of this slave was dashed off one morning during the visit to Rome, and the original being the bearer of it to some artist friends in Rome, they were so delighted with it that they procured his immediate election into the Academy of St. Luke.

The Duke of Wellington's undoubtedly genuine "Portrait of Don Quevedo" is unapproached in realism. With his massive head covered with bushy iron-gray hair he looks at us through a pair of large round spectacles — rendered imperative by long study — as if he were concocting one of those satires which at last lost him his liberty. The same owner's "Portrait of a Man," until lately said to be one of Velasquez himself, is a simple likeness of a hidalgo fascinating in its inscrutability.

Unrivalled in portraiture, so that his men look ready to step out of their frames, making us regret that owing to the jealousy of Spanish husbands we have so few examples of female loveliness, Velasquez was also great in landscape and historical and subject paintings. Excellent examples of these are given in his "Surrender of Breda"



and "Los Bebedores," of which first-rate copies are shown, while for more domestic scenes, witness his "Hilanderas" and "Meninas" represented here by good etchings lent by the Spanish ambassador. In this last picture Velasquez has the Cross of St. Jago, the story of which is that Philip on inspecting the painting declared there was only one thing wanting, and taking the brush from Velasquez, painted the Cross on his breast on the canvas. It required, however, a dispensation from the Pope, after a delay of two years, to overcome the scruples of the grandees at receiving the artist into their ranks.

The "Meninas" was the last great work of this consummate master, and one cannot but feel indignant that the last four years of his life should have been frittered away in arranging court ceremonials, placing the King's chair at dinner—doubtful honors!—which fell to his lot in consequence of his being appointed to a post answering to our Lord Chamberlain. On the occasion of the marriage by proxy of the Infanta Maria Theresa to Louis XIV, Velasquez's duty was to journey with the King, have a fine pavilion prepared, and receive the Royal personages at the Pheasant's Isle on the Bidassoa, the scene of so many famous interviews. Fatigue, however, and malaria developed into a fever soon after his return to Madrid, and in spite of every effort Velasquez died August, 1660, his wife Juana surviving him only eight days.

We must now proceed to notice somewhat briefly the works of that artist whose name is so widely known throughout Europe as to be, until very lately, almost the sole representative of the Spanish School of Painting.

Bartolomé Esteban Murillo was born at Seville at the close of the year 1617. At an early age he began to blacken the whitewashed walls of his humble home with his sketches and to scratch figures on the floor. His childhood was passed without education or pleasures, so that one of his biographers calls him a most melancholy youth. Fortunately, the boy had a relative, Juan de Castillo, of some repute as a colorist, who out of compassion took him to his studio, though unable to teach him much more than correct drawing and the art of priming his own canvases, by which much expense was spared, and which served him in good stead when thrown on his own resources. This occurred in 1640, in consequence of Castillo's removal to Cadiz, when Murillo, deprived of both teacher and kind protector, had to earn his own living.

At that time there was, and still is, a market or *feria* held every Thursday in a broad street in Seville in front of the Church of All Saints, which is remarkable for its semi-Moorish belfry. It was the custom for very inferior artists to post themselves in this market with their canvas and colors, and to execute orders on the spot for pictures in religious subjects to adorn the poorer class of houses, or for sale to South American traders for exportation to the numerous churches and convents then being built. Murillo at once betook himself to this *feria*, and being obliged to work very rapidly and on various subjects, he attained a remarkable freedom of touch and readiness of expression.

At this epoch an old pupil of Castillo's, named Moya, returned to Seville from the Low Countries and London, where he had been instructed by Vandyke. Seeing the excellent work done by his friend, Murillo determined to improve himself by travel, but the great, and, indeed, the only obstacle was the utter want of means. However, there was still the *feria*; so cutting a large piece of canvas into various sizes he painted thereon pictures in all styles and disposed of them to the traders for exportation to South America, where, doubtless, even now many might still be found in ruined out-of-the-way convents and churches. With the funds thus obtained, Murillo went at once to Madrid, where Velasquez, then at the height of his fame, received him most kindly, took him to his studio and home, and gave him every possible facility for studying the great masters in the Escorial and elsewhere; besides introducing him to Olivarez, need one say "the great art patron," and ultimately showing some copies of his paintings to Philip. When two years had been thus usefully employed, Murillo determined to go no farther in search of improvement, but to return to Seville; and notwithstanding Velasquez's entreaties, and it was said on account of the disgust he felt at the disgrace of Olivarez, he would take no service under Philip, nor receive his bounty. Arriving at Seville, poor and unknown as he left it, he got a commission to paint three pictures for the Convent of St. Francis, simply because no known painter would do them cheaply enough. On their completion, however, the painter rose to fame at a bound. Crowds flocked to see them and orders flowed in from all parts of Spain. These cloisters were burned in 1810, but, fortunately in this case, Marshal Soult had the pictures safe in his gallery.

From this time (1645) until his death in 1682, Murillo never left his home in Seville. In 1648 his position was so good that he was able to marry a lady of property living at Pilas, whom report says he won by introducing her as an angel in an altar-piece, being afraid to declare his passion otherwise. No portrait exists of this lady, Donna Beatriz, but both she and her daughter were in later life models for his virgins and saints—of which we may say in passing that they were not mere inanities, but that in them all we see the expression of a human heart with human passions like our own. After his marriage Murillo changed his manner, which is called "the cold," to "the warm," adopting a softer outline and a more mellow coloring, such as characterize some of his best works. It has been observed of his latest works in his "*vaporoso*," or soft manner, that they seemed to be painted "with blood and milk."

With few exceptions, we shall do no more than name the numerous pictures of religious subjects in which the devout Murillo excelled. We cannot forbear to speak of the "Virgin and Child," lent by Lord Wantage, a large canvas 64" x 43". The Virgin for this enchanting picture was evidently a high-born woman—and we know that Philip III's Queen considered it an honor to be introduced as such into a picture. She has an exalted and happy expression and sits "as a queen," but with a total absence of hauteur. This splendid work was formerly an altar-piece in the St. Diego Palace, and was purchased, as we can say of all our Murillos, and not stolen. The large "Magdalen," 65" x 48", from the royal collection in Madrid, and lent by Sir John Sinclair, is a highly finished picture in which the drapery of the ruby-colored robe is wonderful. Sir F. Cook's "Ecce Homo" is sublime. An early work of the master is "Two Monks," representing a Franciscan monk, of whom Murillo was the chosen painter, standing with uplifted eyes, his hands being placed on the head of a sick companion who leans against a tree. This picture being too stiff to roll up was left in the Alcázar by Soult. It was ultimately bought by Mr. Ford.

Murillo appears to have been as great in portrait-painting as he was in ideal or religious art; he unfortunately left but few of persons known to posterity, but they are perfect in point of truth and nature. Four portraits by him are in this exhibition, namely, "Don Luis de Haro"—nephew of Olivarez; "A Man," lent by Mr. Rawlinson, and considered by some to be equal to any portrait by Velasquez; "A Lady," from Lucien Bonaparte's collection; and "Don Andres de Andrade," a canvas 78" x 46", described by some as a repetition of one in the Louvre. It is the full-length portrait of a sinister-looking man whose handsome black dress is relieved by white slashed sleeves, a white *golilla*, or collar, and long white stockings; his hand rests on the head of a dog just as forbidding looking as the Don himself, who was leader of the processions in Seville Cathedral. This picture was bought some years ago by Mr. Brockenbury, but a dispute about the price led to the dealer informing the Government, upon which an old law was enforced prohibiting the exportation of Murillo's works. A poor copy was, however, surreptitiously smuggled into the frame, while the original was smuggled out of Spain. The National Gallery refused to pay £500 for it, upon which Louis Philippe bought it for £1,000.

The Earl of Dudley lends the six pictures, 41" x 53", forming the set of "The Prodigal Son" bought by his father at the Salamanca sale. The "Return of the Prodigal" was in some way separated from its companions and fell into the hands of the dealer who in 1850 offered it to Monsieur Salamanca for an enormous sum, which he refused to pay. Queen Isabella of Spain at once purchased it at that price and sent it to Pius IX. The late Lord Dudley got it from the Pope in exchange for a Bonifacio and a Fra Angelico, and used to chuckle over his success and boast that he was the first man who had got the Pope to sell a picture.

The beautiful painting of "The Flower Girl," from Dulwich Gallery, is doubtless well known for its fine coloring and composition.

"The Fruitseller" is an exquisitely pathetic picture of an old man holding a basket of fruit in his right hand, while another hangs on his arm; the left hand leans on a stick, so vividly depicted that one can almost see the hand tremble as he holds it.

There are two rarities in landscape—in which only Velasquez excelled him—a fine "View in Pilas," a large composition, 75" x 49", reminding us of Salvator Rosa; and a smaller piece, from the W. Graham Collection, having delicately painted figures both on foot and horseback in the foreground, and in the background a massive castle on a hill.

We close our remarks on the paintings with the mention of Murillo's own portrait painted by him for his children, as a Latin inscription on the frame informs us. In this transcendent portrait—one of the most fascinating of his works—one sees a "head of great capacity and a sound and unsophisticated heart in the facial index of a lofty and generous soul." There was never a more thorough delineation of true, unpretentious manliness. This portrait, the most authentic of all, probably copied for the Prado, was purchased by Sir L. Dundas for £100, sold a few years later for £380, and in 1850 for £829 10s.

"Murillo's character bears a strong resemblance to that of Velasquez and it is not unlikely that the great court painter may have been his model as a man and an artist. Discreet and conciliatory towards friends and rivals, both seemed free from that proneness to boasting and self-glorification inherent in the Oriental blood of Andalusia. Murillo's pupils found him a gentle and painstaking master and in after-life a generous fatherly friend. At his death, caused by a fall from a scaffold (when painting a fresco), they lamented as if they had been his children. Stirling says, "All that is known of this gifted artist tends to the advantage of his fame."

Sir David Wilkie says, "Velasquez and Murillo are preferred, and with reason, to all other Spanish painters as the most original and characteristic of their school. These two great painters are remarkable for having lived in the same time, in the same school, painted from the same people and of the same age, and yet to have formed two styles so different and opposite, that the most unlearned can scarcely mistake them, Murillo being all softness, while Velasquez is all sparkle and vivacity."

"The transcendent success of Murillo was the beginning of the end of the History of Spanish Art. Literature had spread into many channels everywhere but in Spain, and art had associated itself with

social interests at the close of the seventeenth century in France, in the Low Countries and even with us in England. But in Spain it was still limited to the field of church decoration. Spain became poor and the rest of Europe rich. It is said that hardihood of character began to decline from the day of the Conquest of Granada, and all the cardinal virtues were tarnished by the wealth of Mexico and Peru, which ceased when it became necessary. Nothing remained but pride and piety, the one taking the hard form of orthodoxy, and the other depriving the Spaniards of the luxury of arts and letters."

Two specimens of the superstition of Philip IV we give, though at the risk of prolonging the paper, "The *golilla*, a wide stiff linen collar standing out from the neck, was first introduced by Philip who was so delighted with the happy idea that he celebrated the invention by a feast, the King and Court going in procession to the Chapel of the Guardian Angel to render thanks to God for the blessing." He left money for 100,000 masses and in case that should be insufficient, his soul was left residuary legatee!

[To be continued.]



UNTIL a few weeks ago there stood around the southeast angle of Westminster Abbey a group of small houses of eighteenth-century construction. These have now been demolished and the site cleared. The advantages of this work are important; the Chapter-house of the Abbey, which until 1547 formed the House of Parliament of the Commons of England and which was before practically hidden, now comes well into view, and the Abbey generally gains very much in appearance. So inflammable and so close to the Abbey were these houses that, had they taken fire, such parts of the Abbey as the Chapter-house and Henry VII Chapel would certainly have received serious damage. This menace is now, happily, permanently removed. There seems some doubt as to the use which will be made of the space thus freed. Some time ago a gentleman offered to erect a monumental chapel in connection with Westminster Abbey, and the position now cleared was spoken of as a site for the same. The Royal Commission, however, which originally went into this whole matter and condemned the lately demolished houses, did not agree as to the suitability of this site for the monumental addition. Since Parliament has now met, an opportunity will occur for the discussion of the matter before any decision is reached.

It appears probable that much exception will be taken to the proposal. The question may be raised as to whether there is any great demand for a monumental chapel. It is true, the Abbey itself is already crowded with monuments of all dates, but this fact would seem to afford some guaranty that none but the really "great" should hereafter be granted the honor of burial within the walls. Again, it may be made a matter of doubt whether interment within such an addition as is contemplated would be regarded in the public mind as equivalent to burial in the Abbey itself; if not, there seems no good reason why the chapel should not have an altogether separate site. During the demolition portions of the houses were left in such position and to such height as it is proposed the monumental chapel shall stand. As far as the general public is concerned, this is not perhaps a very successful test; but very few who give an opinion are in favor of anything but a complete clearance. The improvement of the view from the easterly and southeasterly directions is really remarkable, and it is sincerely to be hoped that the Government may decide to leave the site as open as possible and put up the monumental chapel elsewhere.

Mr. Penrose has officially announced that the choice of the Council of the R. I. B. A. for the Royal Gold Medal has this year fallen upon Mr. Ernest George, F. R. I. B. A. That the nomination was popular was immediately evident from the applause with which the announcement was greeted, and more especially as, now that time has allowed a mature judgment to be formed, opinion remains unanimous that to no one could the honor more justly come. Mr. Ernest George has done a great deal of work in South and West England, especially in country mansions and domestic work generally; in London he has built some very large houses and a variety of domestic buildings, as well as business and other premises. He is by no means an old man, though he is far from being the "young man of promise" which he is, apparently, often thought to be. He is considerably over fifty. His skillful planning is always productive of a picturesque and original grouping; his detail is full of thought and care, and invariably pleases with its sense of fitness.

It seems probable that London may soon be in the enjoyment of

a constant supply of sea-water. As long as fourteen years ago this project was seriously entertained and Parliamentary powers were obtained to proceed; but upon close inquiry, it became evident that the demand was far in excess of that contemplated and the opportunities were neglected until it should be possible to carry out a scheme on a wider basis. A new company has now been formed and will apply to Parliament for power early in the ensuing session. It is proposed to draw water from a spot a little to the west of Brighton, where the water is usually in a very pure and clean condition. The water would be pumped from the deep sea into settling reservoirs and afterwards raised to a great reservoir constructed on the summit of an adjacent line of hills, at a height of over 500 feet above the sea-level. Beyond this, it is said, no further pumping would be necessary, the force of gravitation being sufficient to carry the water to the top of all the principal houses in London 50 miles away. The cost of this project is estimated at £450,000, which is to include the main scheme of distribution; and two years would be sufficient for carrying out the work. There is not much difference of opinion as to the practical benefits that would result from a supply of salt water. For the cleansing and watering of the streets and the flushing of sewers, salt water is probably at least as well adapted as fresh; while connection with a salt-water main would be valuable and economical to bathing-establishments, hotels, infirmaries, and institutions of all kinds, as well as private houses. It is claimed that a sea-water supply to London would be practically equivalent to adding 25 per cent to the present fresh-water supply. The scheme seems commendable and, indeed, has not received adverse criticism; it has ever seemed anomalous that filtered water should flush the sewers and wash the streets; it has been a constant item of complaint that the streets and, especially in summer-time, the wood-block paving lacked much in point of sweetness and cleanliness. With a salt-water supply it is stated that "watering the streets would be less frequent and more efficient"; the latter quality is at any rate eminently desirable.

One of the very few spots of interest and beauty which exist in the east end of London stands in danger of being swept away. This is the group of almshouses built in 1695, probably by Sir Christopher Wren, and occupied by retired captains and commanders of the Merchant Service. A tablet in each of the gable ends tells us that

"THIS ALMSHOUSE wherein 28 decay'd Masters & Comanders of "Ships or y<sup>e</sup> widows of such are maintain'd was built by y<sup>e</sup> Corp<sup>o</sup> of "TRINITY HOUSE, AN. 1695. The ground was given by Cap<sup>t</sup> "HEN<sup>y</sup> MUDD of Rattcliff, an Elder Brother, whose widow did also "contribute."

This establishment is in the hands of the Corporation of Trinity House which, subject to the consent of the Charity Commissioners, has the sole control of the charity finances. The Corporation is now appealing for permission to abolish these almshouses, which are stated to be in immediate need of expensive sanitary repair, and to dispose of the site for brewery or other purposes for the benefit of the charity fund. The Corporation, as such, has in this connection but one duty and responsibility, that of using to the most advantageous effect the charities over which it has control. The general public, on the other hand, are actuated by a pure and commendable sentiment in making a struggle to retain the almshouses as they now exist. From nautical and mercantile connections the buildings have assumed almost the position of a national memorial; æsthetically they are of the highest value, for the houses are of great architectural merit and contain much that is interesting in the form of stained glass, carving, leadwork and inscription. As an open space, its trees and turf and old-time spirit are very welcome in a wearisome district. At the official inquiry held before the Charity Commissioners, the several societies for the protection of ancient buildings, and the R. I. B. A. were represented; the active sympathy of Mr. William Morris, Sir Walter Besant, etc., has been enlisted, and Mr. F. C. Penrose and J. McVicar Anderson, President and Past-President R. I. B. A., respectively attended in person and spoke earnestly against the proposed demolition. Lord Leighton, too, sent from what has unhappily proved his death-bed a sympathetic message showing himself fully at one with them. The press has done much in making the facts of the case public, and this combined influence may induce the Commissioners to recommend a continuance of the present condition of things, alteration of the sanitary arrangements only being made. Of all the houses in question the smaller part are ancient and of real interest, so it may be that the more modern buildings will be removed, and against this proposal but little could be urged. The Commissioners have not yet published their decision, so that the fate of the buildings is still an open question.

The Science Committee of the R. I. B. A. some time ago instituted a scheme for a series of brickwork tests, with the ultimate view of establishing, if possible, a reliable standard and ratio of strength between individual bricks and brickwork in various cementing materials. Through Sir William Arrol's valuable help, the tests have followed comparatively rapidly upon the preliminaries of the movement. Professor Unwin, too, has kindly given his aid in testing the bricks and cement and mortar employed. The tests are being carried out in a perfectly systematic manner, and the three-months' tests have lately been completed. The Committee will not, however, report until the whole of the tests are complete, and consequently it is desirable that the results at present obtained should not yet be made public. I am, however, in a position to

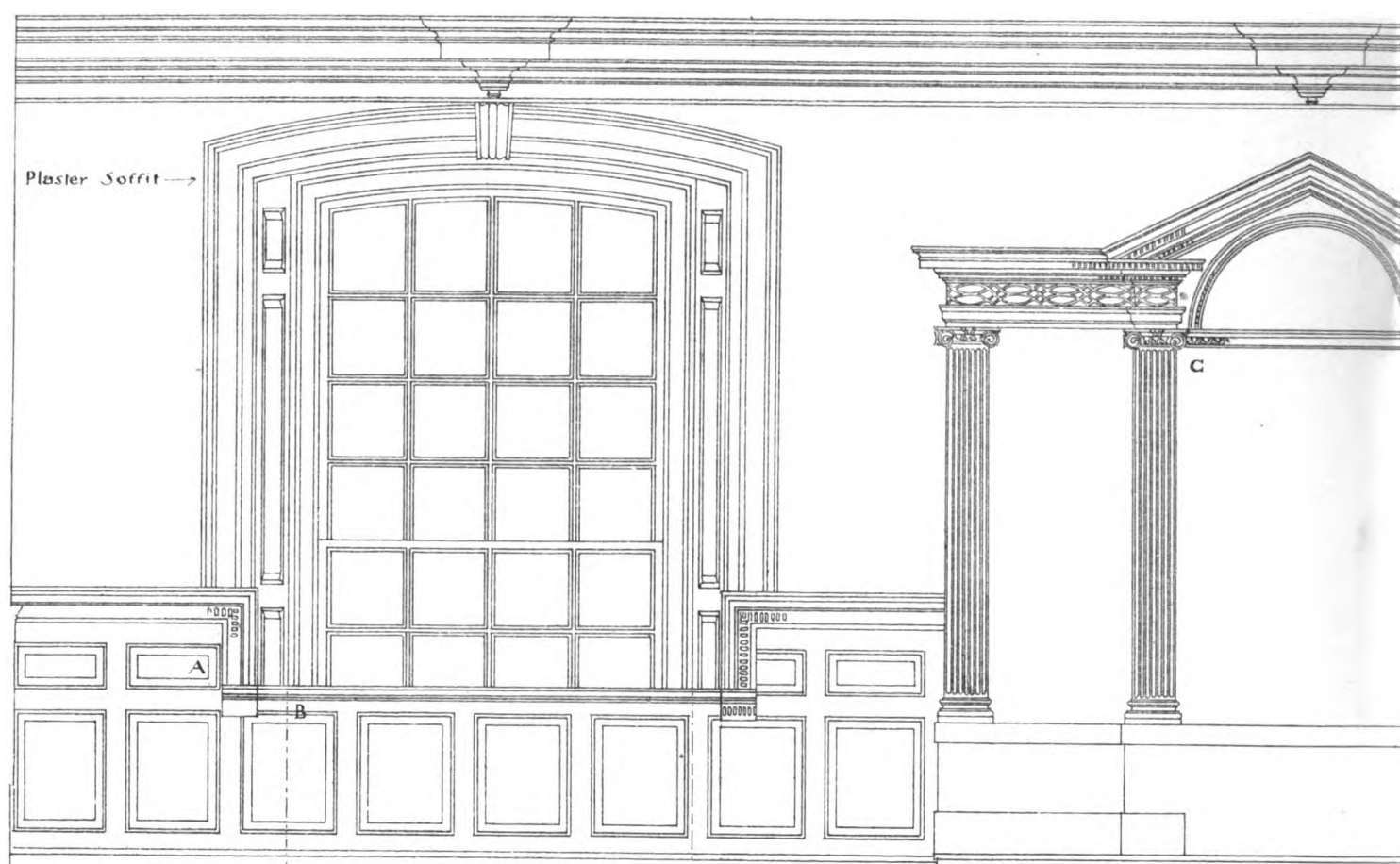
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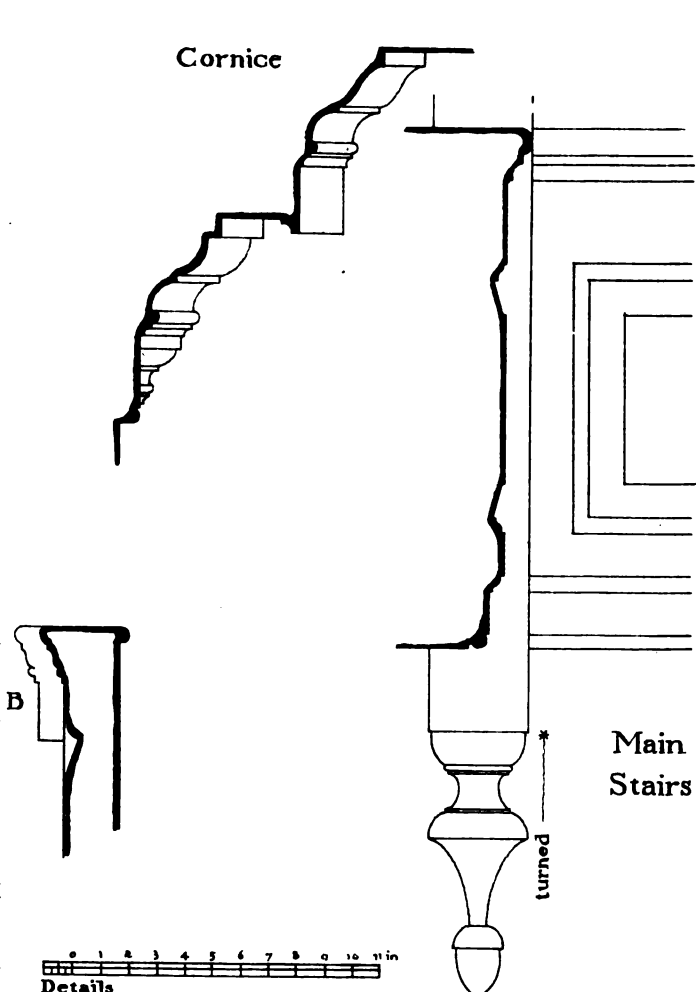
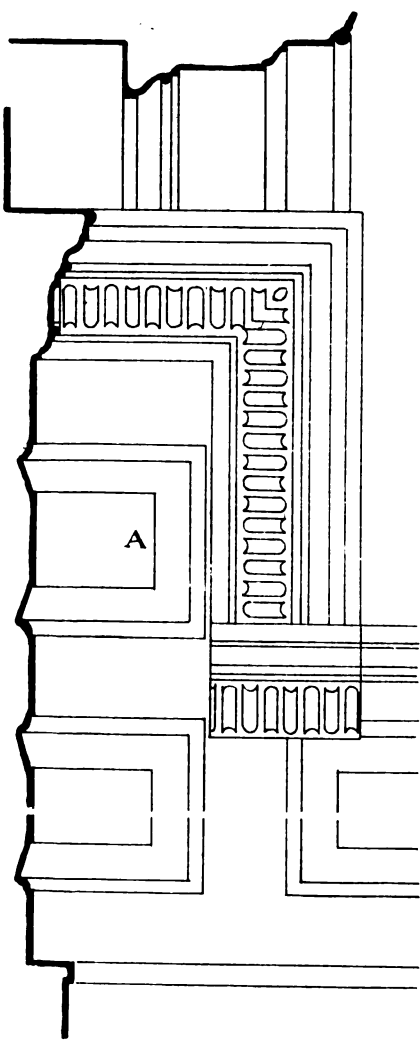
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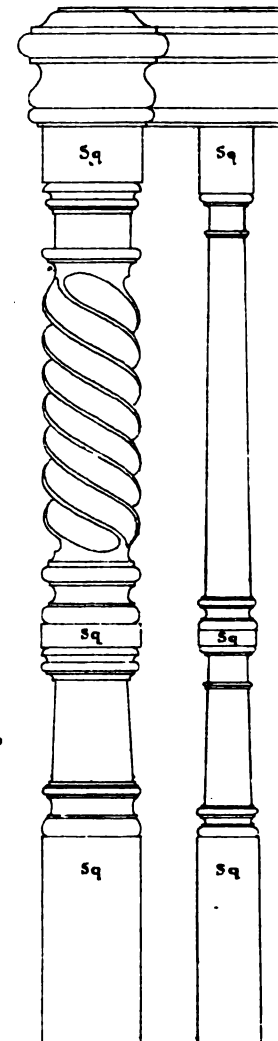
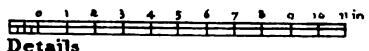
Bench Floor 1' 6" above Court Room Floor

The East Wall of the Court Room

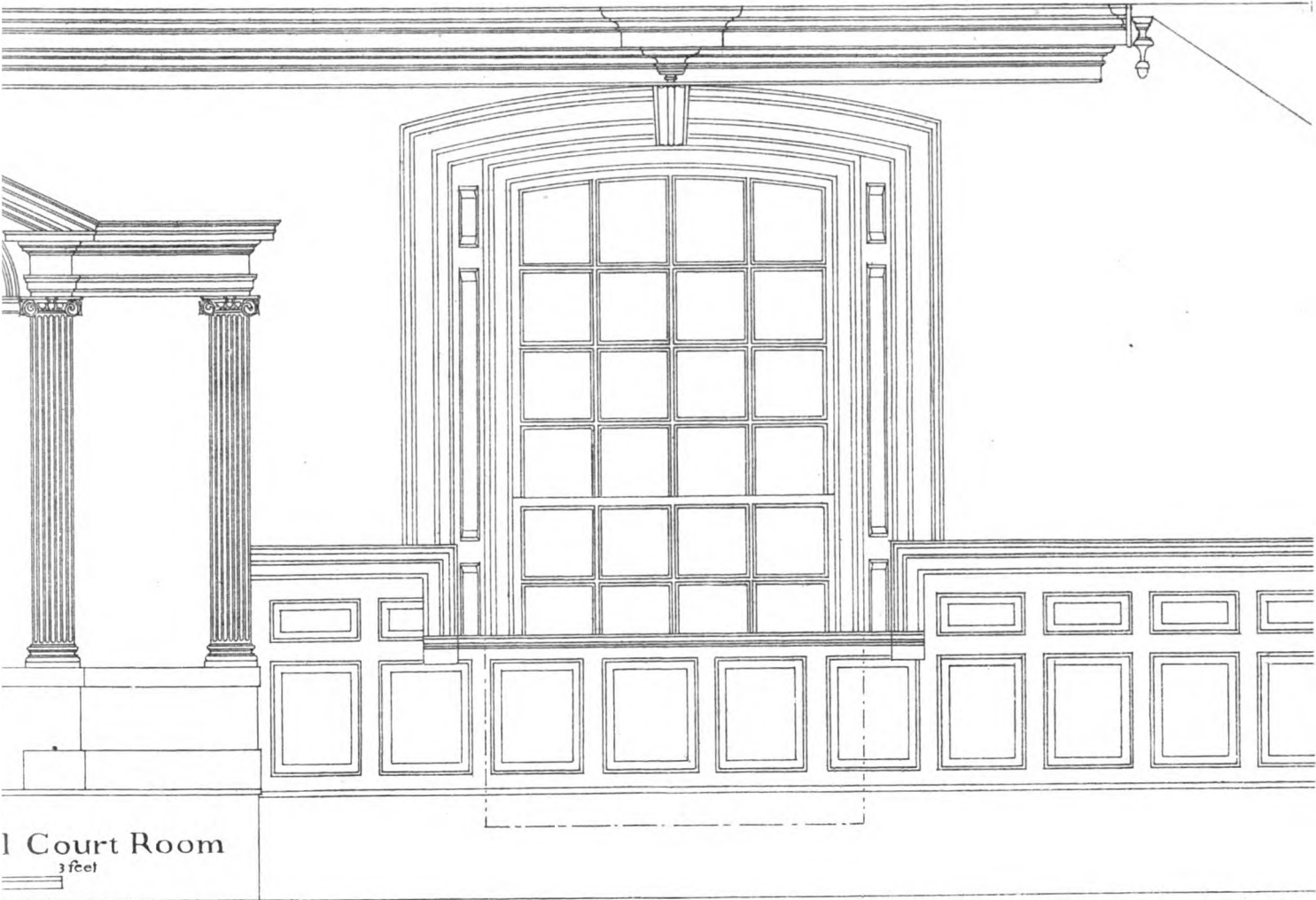


Cornice

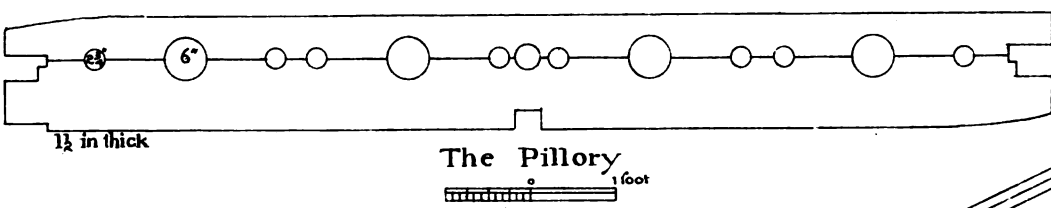
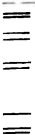
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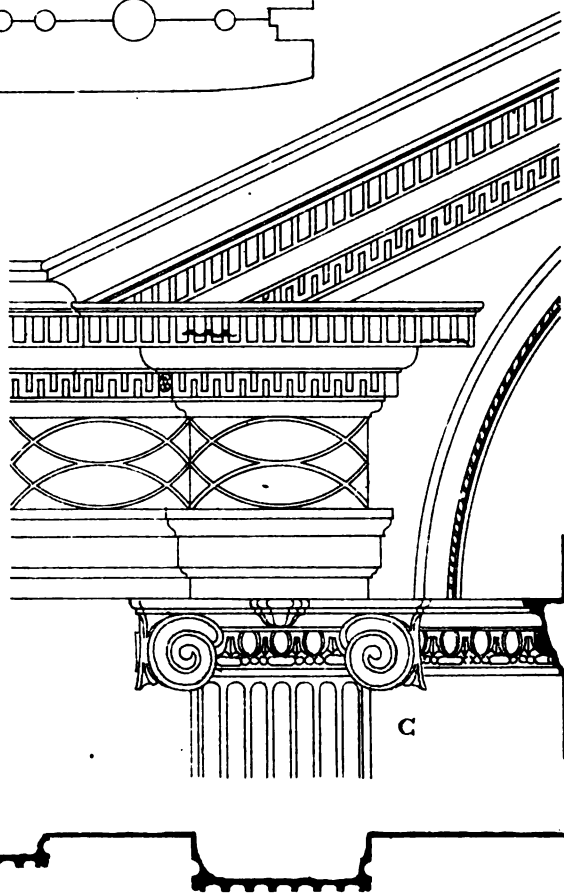
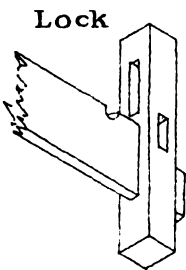




1 Court Room  
3 feet



DETAILS  
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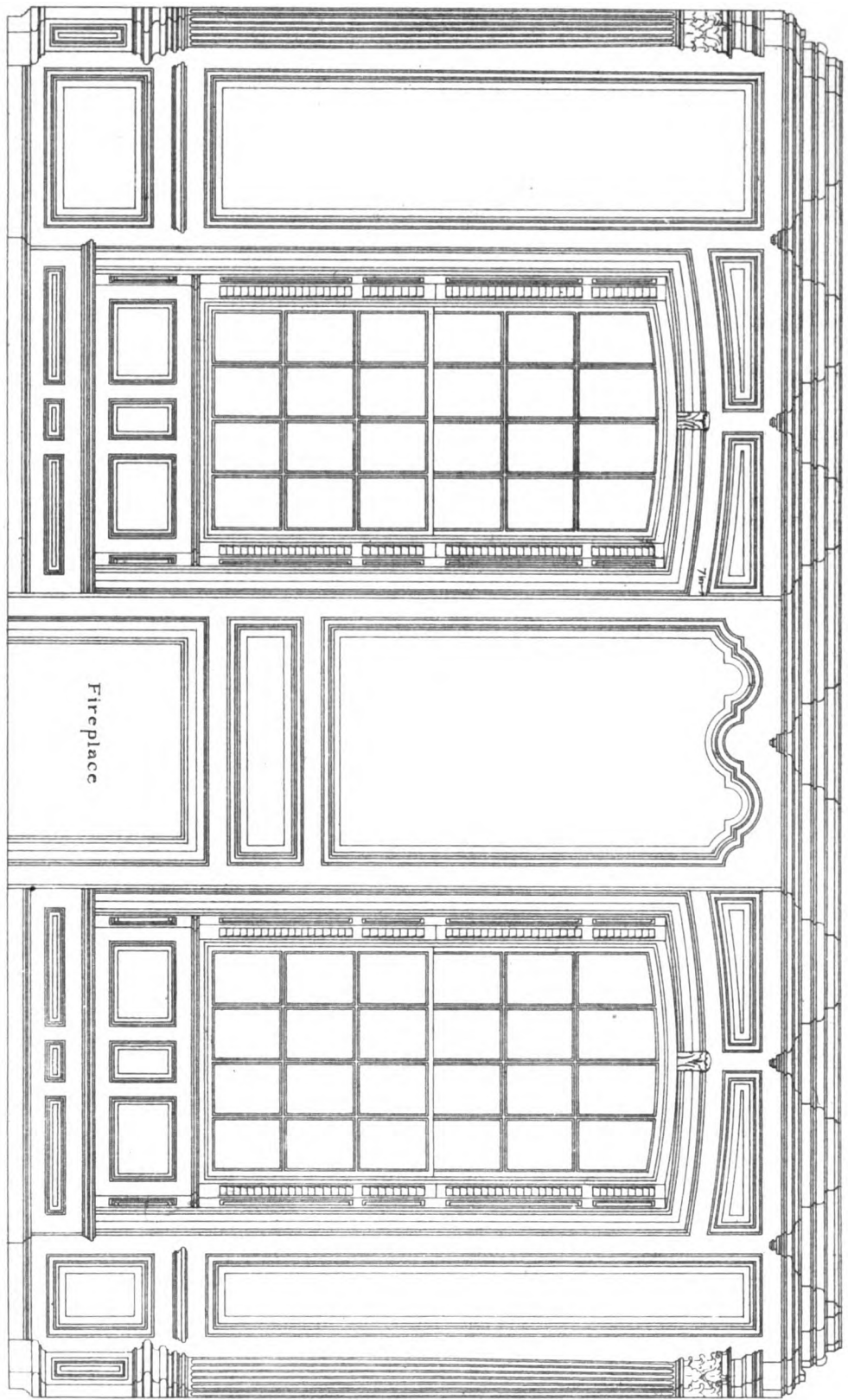


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1894

The South Wall

The Senate Chamber  
IN THE STATE HOUSE  
at Newport, R.I.

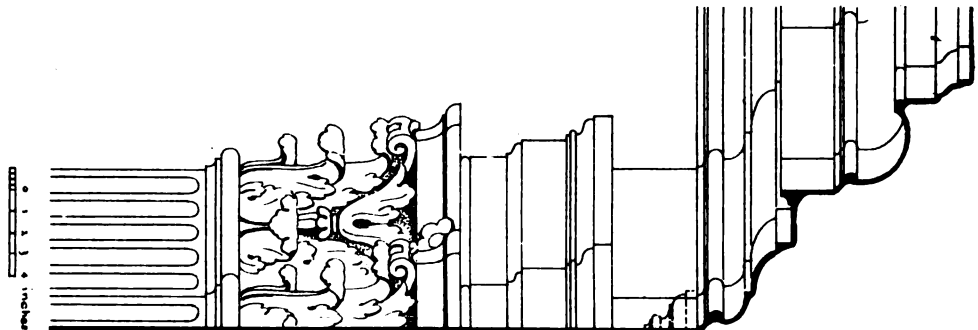
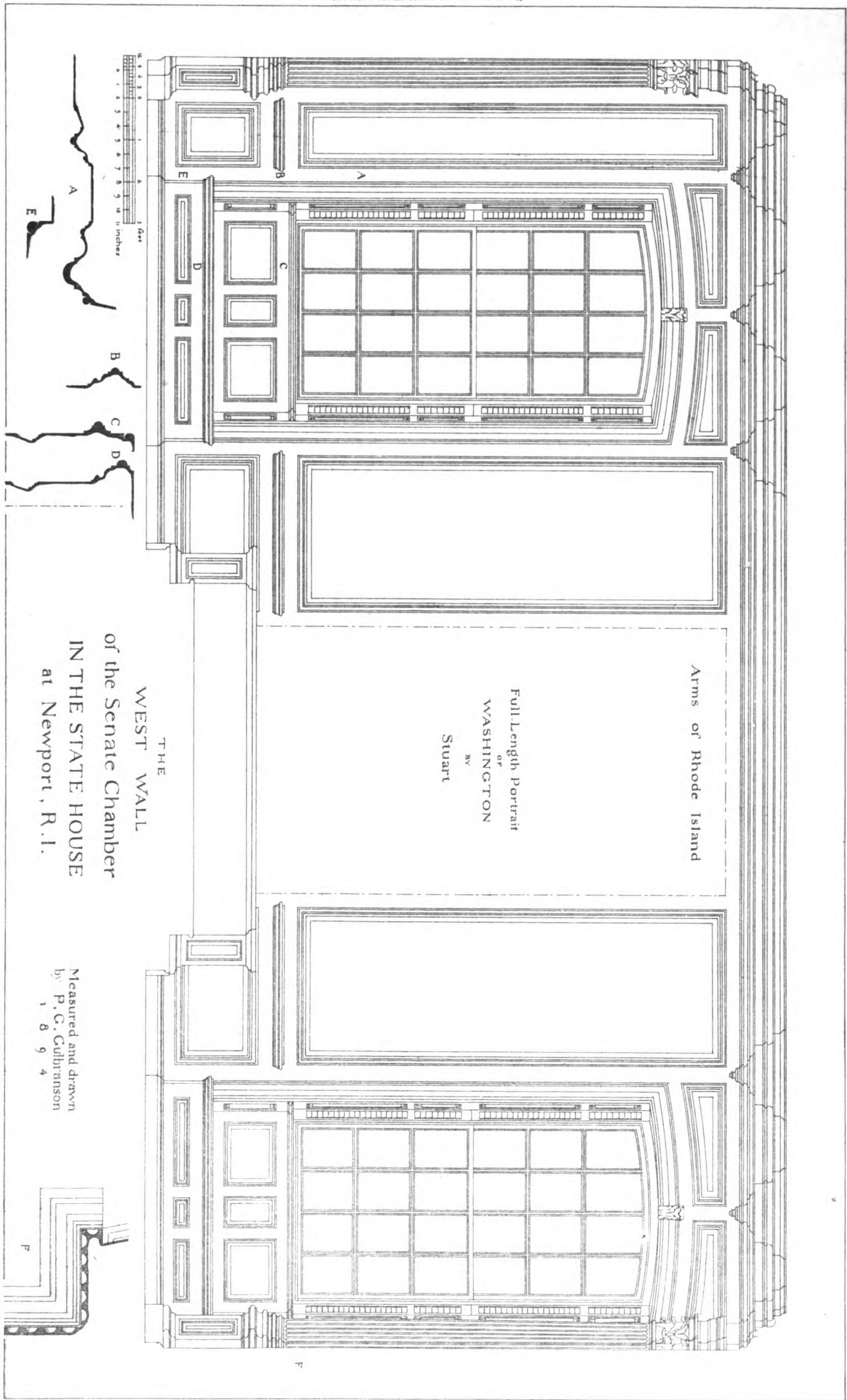


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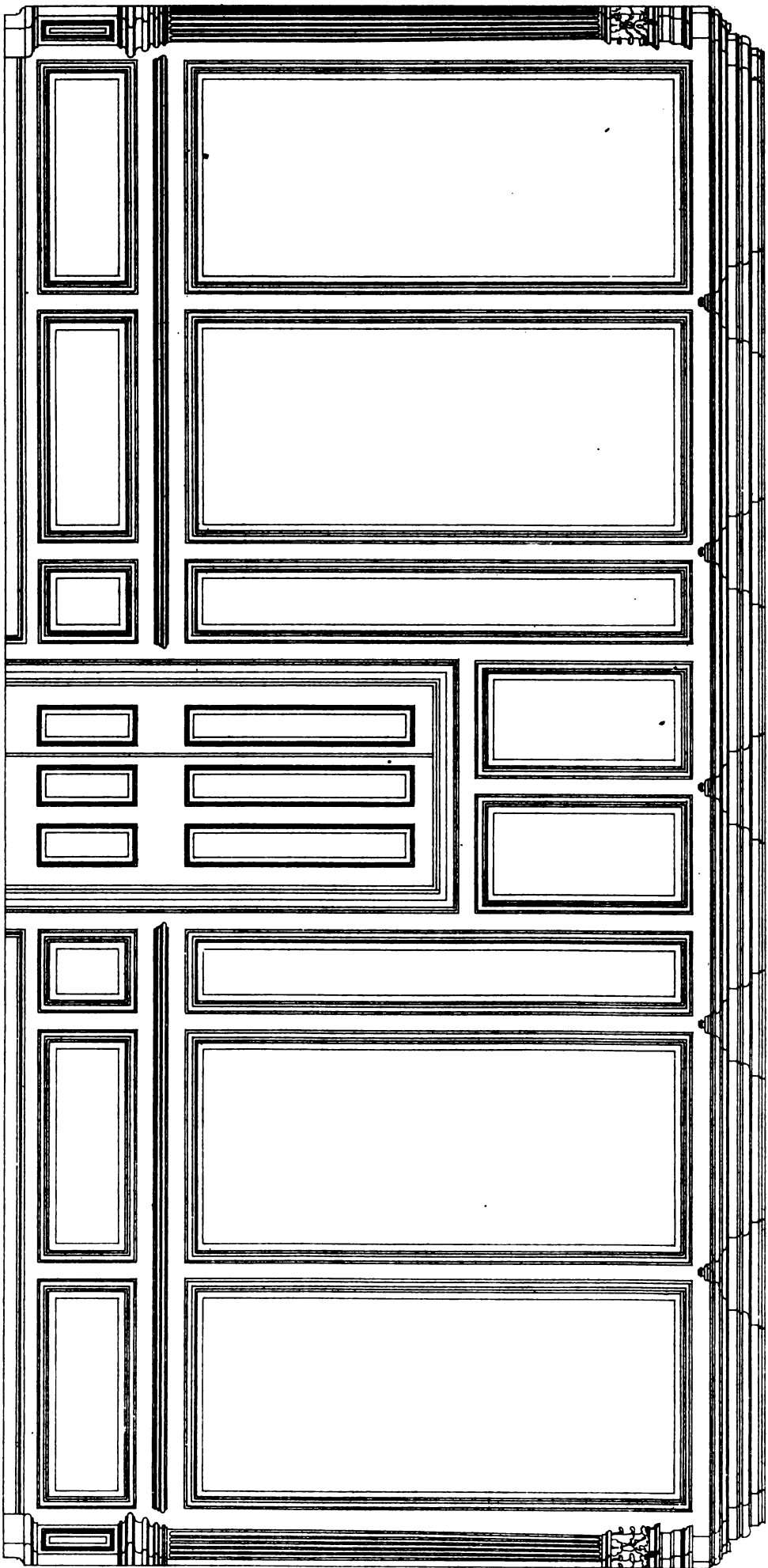




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THE EAST WALL  
Scale 1" = 3'-0"

The Senate Chamber  
IN THE STATE HOUSE  
at Newport, R. I.

REPRODUCED BY THE ARCHITECT



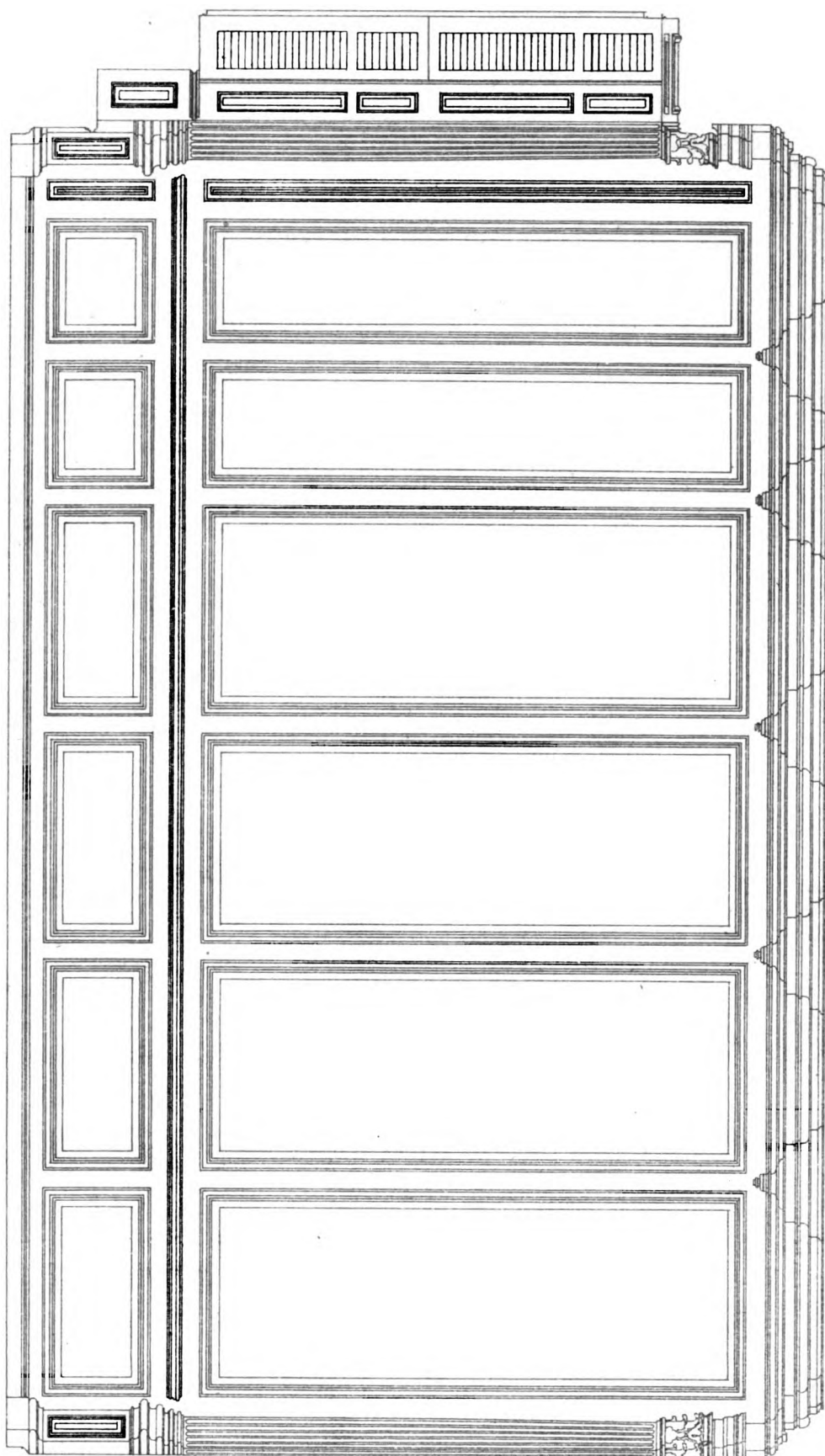
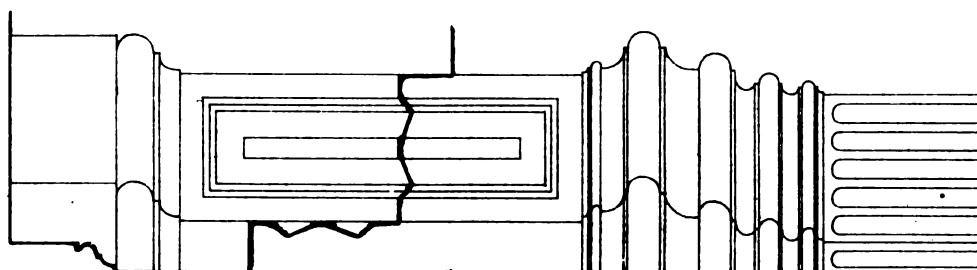


Measured and drawn  
by P. C. Gilbranson  
1894



THE NORTH WALL

The Senate Chamber  
IN THE STATE HOUSE  
at Newport, R.I.





sketch in outline the scheme of tests. In a preliminary report the Science Committee formulated their suggestions as to the manner in which the tests should be conducted. It was definitely stated that the object of the tests was to ascertain the ratio between the strength of bricks and of the same bricks when built in walls or piers, in other words, to discover the diminution of resistance to crushing, due to jointing and bedding in various cementing materials. Three cementing materials were suggested — lime and sand, hydraulic cement and sand, and cement and sand, the last in two proportions, viz: one to three and one to five; and two classes, at least, of brick, those with and those without "frogs." The bricks should be tested separately, and the cement for tensile strength. The piers should be constructed in the four varieties of cementing matter mentioned, 18" x 18" x 6' high for three, six, nine and twelve months' test; sixteen piers with "frogs," sixteen without and the whole number in duplicate — a total, indeed, of sixty-four piers of identical proportion.

As a matter of fact, though these suggestions have in some respects been followed, important variations have been made. Instead of the presence or absence of the "frog" forming the sole distinction in the bricks employed, a variety of quality and type was introduced. The bricks used were London stock, Gault bricks, Leicestershire reds and Staffordshire blue bricks. These four varieties were built in piers, 18" x 18" x 6' high, in lime mortar of the proportion one of lime to three of sand, and again in cement, one Portland cement to three of sand, eight piers for the three months' test, and eight piers for the test of six or nine months, as may be considered most desirable. The whole were built in duplicate — in all, thirty-two piers of identical proportion. These piers were built in the open air on strong iron boiler-plate, resting on a pair of iron rails some two feet apart. The top of the piers were covered with stout waterproof felt, but beyond this the piers were without protecting conditions. The rails were laid in a straight line and sixteen piers built toward either end: in the middle of the line of rails was erected a powerful hydraulic press, capable of exerting a pressure of four hundred tons. The ram head was capable of being brought flush with the rails on which the piers were built. The method of testing was as follows: the rails were carefully greased and chains made fast to the plate on which the piers rested; a crab and winch then was used to bring the plate along the rails until it was centrally disposed over the ram head, which was some three feet in diameter. The top of the pier was carefully packed with felt in order to give a level bearing against the upper framework of the machine. The pressure was then slowly applied and increased until the pier was completely crushed: careful notes were taken of the pressure and phenomena occurring at various stages, and the longitudinal contraction measured; a series of photographs, too, was taken of every pier from various positions before and after crushing and during the actual process.

It has been the effort of the promoters of these tests to reproduce so far as is possible, the actual conditions by which brickwork in ordinary practice is affected. Thus the bricks were not picked, but, as well as the cementing materials, obtained from the manufacturers without information being given as to the purpose to which they were to be applied. The piers were built in the usual bond by bricklayers of ordinary qualifications. No piers of small height were built, as it was felt impossible practically to compare results of piers of, say, six feet with those of two feet high. The height of six feet was chosen as the greatest that could be moved and manipulated without much risk of damage. The age of the piers was fixed at three and nine months, because, although by three months the work has not attained its ultimate strength, not often in actual practice is brickwork built more than three months before receiving its maximum load; the nine months' tests are, of course, valuable for comparison. The tests were carried out in a vertical position, and in every case the pier was transferred to the ram head smoothly and without much possibility of even slight shaking. Objection may possibly be taken to the speed with which the pressure was applied, none of the piers requiring more than half an hour to be completely crushed. But I have it from a high technical authority that had the pressure been applied so slowly that a month should intervene before crushing took place, the measurement of pressure would probably read approximately as at present, so steady and regular is the hydraulic ram in its movements.

Comparatively little has been done hitherto in the direction of brickwork tests, owing, no doubt, to the great expense attendant upon experiments of this nature. The most important tests have been those organized by the Germans<sup>1</sup> at Berlin under Dr. Böhme, who based a ratio upon his results, and those valuable experiments carried out at the Watertown arsenal by your own Government about ten years ago: very remarkable results were obtained during the latter experiments in the testing of hollow piers and those with joint broken only at every sixth course. It is perhaps to be regretted that something of a like nature was not included in the present tests. Important confirmation or new facts might conceivably have been forthcoming had the present opportunities been thus utilized. But though the present tests are primarily of local importance, yet they will be of universal interest if it be found possible to establish the ratio successfully. There is no great difficulty in finding the ultimate strength of any local brick and any cementing material.

With these facts given, it is hoped by consulting the ratios which this scheme of tests will afford, it may be possible to arrive at a tolerably correct estimate of the ultimate strength of brickwork formed of such materials.

### EXPERIMENTS ON ARCHES.

AN extremely valuable and interesting series of experiments have been carried out by the Austrian Association of Engineers and Architects, on model arches of spans ranging from 4.42 ft. up to 75.4 ft. A sum of upwards of 4,000l. sterling was expended, though the work was to a large extent done gratuitously. The arches of 4.42 ft. span were seven in number, and of the following general particulars and dimensions:

Number.	Material.	Thickness at Crown.		Weight of Arch per sq. ft. covered.	Deflection of Crown under a load of 1,638 lbs. per sq. ft.
		in.	in.	lbs.	in.
1	Schober special bricks.....	6.29	1.58	130	.46
2	Hönel special bricks.....	3.94	1.97	71.6	.62
3	Schneider special bricks.....	3.94	1.58	128	.91
4	Glücksels special bricks.....	3.94	1.58	125	1.63
5	Ordinary bricks, radial joints.....	5.90	5.70	71	
6	Ordinary bricks, longitudinal joints...	5.90	4.91	77	
7	Rammed concrete.....	2.95	4.52	92	.77

The abutments for these arches were I-beams firmly coupled together by round tie-rods and channels. The arches were levelled up with earth packing, and loaded with pig-iron distributed over the whole span. Failure in the case of Nos. 3 and 4 took place with a load of about 1,638 lbs. per square foot, but the other arches carried this without showing any signs of rupture. The deflection at the crown was measured in each case at frequent intervals, and the results recorded. In the case of Nos. 3, 4 and 6 the deflection increased more rapidly than the load, but with the other arches a fair proportionality between deflection and load was maintained. The brick arches were laid in lime mortar, and not in hydraulic cement. The concrete arch consisted of one part of Portland cement with five parts of sand. Experiments were next made on arches having a span of 8.85 ft. In this case the load was distributed over one-half the span only. The results obtained are shown by the following Table:

Number.	Material.	Span.	Thickness at Crown,		Rise.	Weight of Arch per sq. ft.	Breaking Load, lbs. per sq. ft. on half span.	Vertical Deflection at Crown under Load.		
			ft.	in.				in.	At Rupture.	Of 400 lbs. per sq. ft.
1	Rammed concrete.....	8.85	3.35	9.05	286	1,127	.94	.34		
2	Ring of cement reinforced with wire netting (Monier's system).	..	1.95	10.23	230	1,217	1.01	.34		
3	Ring of cement (Monier's system) levelled up over the haunches with concrete.....	..	2.17	10.23	505	1,320	1.22	.18		
4	Arch of ordinary bricks.....	..	5.51	9.84	248	883	1.87	.77		
5	" " Hönel bricks.....	..	3.94	5.31	166	491	1.53	1.45		
6	" " corrugated iron.....	..	..	9.84	14	973	1.06	.45		
7	" " corrugated iron with L-iron riveted along it at the springing.....	..	..	..	20	1,100	1.14	.47		

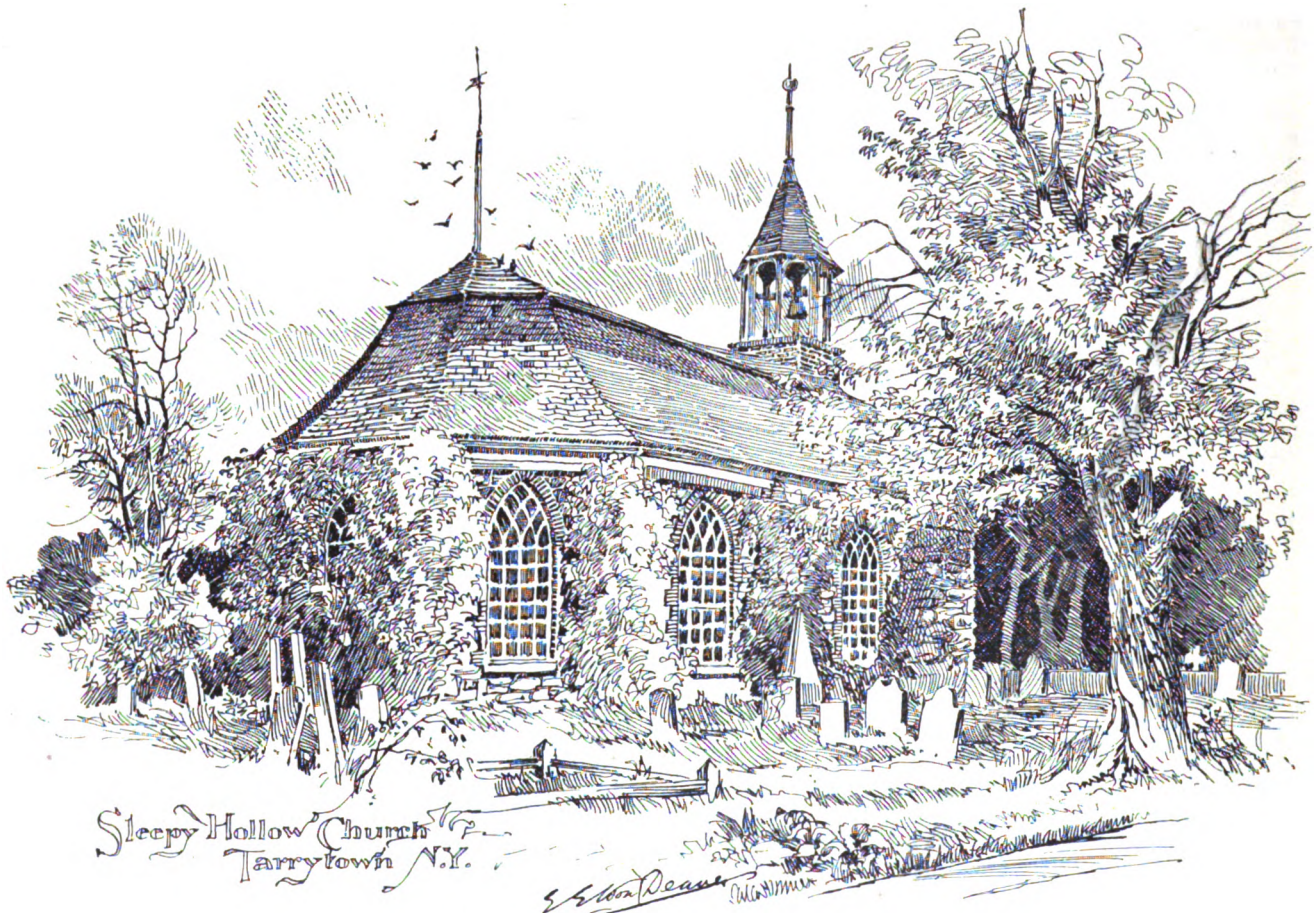
In no case was the deflection proportional to the load, though in the case of No. 6 it was nearly so. In all these cases the abutments consisted of I-beams efficiently tied together. Some experiments were next made on a concrete arch of 13.3 ft. span, 16.1 in. rise, and 3.94 in. thick at the crown. This arch sprang from regular skew-backs, and failed when a load of 790 lbs. per square foot was distributed over one-half the span from abutment to crown. The deflection of the crown at rupture was about  $\frac{1}{4}$  in., but a point midway between springing and crown had deflected  $\frac{1}{8}$  in. before failure occurred. A Monier arch of similar dimensions, tested in the same manner, failed under a load of 872 lbs. per square foot, but both arches showed cracks at the same load, viz, 614 lbs. per square foot. The deflection of the Monier arch at the crown when failure occurred was  $\frac{1}{4}$  in., and at a point half-way between abutment and crown  $\frac{1}{16}$  in. A Melan arch was next tried. In this construction steel arch ribs of I-section are imbedded in the concrete, being spaced in the present instance 3 ft. 4 in. apart. The I-beams in question were 3.15 in. deep, and the concrete-filling was of the same thickness, being flush with their upper and lower flanges. The span was 13.1 ft., and the rise 11.4 in. The arch was loaded on one side only, and failed when 3,370 lbs. per square foot was reached, breaking in three pieces under this load. The first cracks were observed under a load of 3,120 lbs. per square foot on the loaded side.

<sup>1</sup>See Unwin's "Tests of Materials of Construction."



The next arches tested were two of 32 ft. 9.7 in. span and 3 ft. 3½ in. rise, one being of Monier cement and the other of rammed concrete. Each was 13 ft. 1.5 in. broad, and carried a single line of standard-gauge railway. The Monier cement arch was a reproduction of one constructed for actual use in 1889. It consisted of a ring of cement 5.9 in. thick at the crown, and 7.87 in. thick at the springings. The cement was, as usual on Monier's system, reinforced with wire-netting. The dead load on the arch, including filling over haunches, ballast and track, amounted to 307 lbs. per square foot. As a preliminary, an engine and tender were run over the bridge and the deflections at the crown and at quarter-span noted. The locomotive had six wheels, the loads being distributed as follows: leading axle, 10.3 tons; driving axle, 13 tons; trailing axle, 13 tons. The tender had four wheels, the load on each axle being about 9.1 tons. The maximum deflection noted was ½ in., of which one-half was permanent set. Still heavier locomotives were then run over the structure, the deformations being noted at ten different points. No further deformation or permanent set was noted under these loads. Steps were then taken to test the arch to destruction, by piling rails over one-half the span. With 90 tons of rails thus distributed, a crack was observed in the neighborhood of the springings, extending through nearly one-third the total thickness of the arch. On increasing the load to 100 tons, further cracks were noted. This load was left on for 3½ hours, and the deflections recorded. The load was then totally removed, and the permanent set noted, which amounted to ⅓ in. at the crown.

We now come to a still more important series of experiments, in which five arches, each of 74.5 ft. span and a rise of about one-fifth the span, but constructed of different materials, were tested to destruction. The work was done in a quarry at Puckersdorf, where excellent foundations for the abutments, and cheap material for the construction of the arches themselves, were available. Each arch was 6.65 ft. wide. A platform supported on six sets of columns, the feet of which rested directly on the extrados of the arch, extended in each case from one abutment to the crown, and the testing was effected by piling rails on this platform. The first experiments were made upon an arch of cut-stone, and on one of brick. The stone used was a fairly hard limestone of excellent quality. The voussoirs were 1.97 ft. thick at the crown and 3.6 ft. deep at the springings. The mortar used was mixed in the proportion of 5 cwt. of Portland cement to 35 ft. of clean sand. The brickwork arch had precisely similar dimensions to the foregoing. The bricks used were machine pressed, and were thoroughly wet before use. The same quality of mortar was employed. After the work was finished the centres were left in place for some weeks. The whole outer surface of the arches was then rendered with a thin coat of cement, so as to detect cracks more readily. The centres were then removed, and the work of loading the arches proceeded with. The stone arch gave way when the load piled on the platform reached an amount equivalent to 1.99 tons per foot run, and the brick arch when the load reached 1.81 tons per foot run. Up to the point of rupture the stone arch gave no signs of incipient failure, but in the case



The load was then replaced and finally increased up to 180 tons of rails piled on the half-span, when complete failure occurred. The vertical deflection at the crown, under a load of 80 tons, was .36 in., and at the quarter-span .32 in. At 90 tons the corresponding deflections were .44 in. and .42 in., the first crack occurring at this load as already noted. At a load of 170 tons the deflection at the crown was 1.28 in., and at the quarter-span 1.03 in. The rammed concrete arch was of the same span, width and rise; it was, however, 16.4 in. thick. It was built of concrete consisting of one part cement, two parts sand and one part broken stone. The testing was commenced when the concrete was 224 days old. On loading one-half of the span with rails, the first cracks were noted when the load reached 47.8 tons, or 512 lbs. per square foot. These cracks were, for the most part, confined to the spandrel walls in the immediate neighborhood of the abutments. Under a load of about 90 tons, however, a crack was perceived in the arch ring about 2 ft. from the crown on the loaded side. The load was then removed, the deformations noted, and the load replaced and carried up to 195 tons, which was carried for three days without failure taking place. The maximum deflection at the crown was 1.14 in., and at quarter-span on the loaded side, 1.12 in. At quarter-span on the unloaded side the deflection was .49 in. On removing the load the permanent set at these three points was, respectively, .62 in., .66 in. and .30 in.

of the brick arch, cracks declared themselves previously, which were apparently caused by the failure of the mortar, the bricks themselves being intact. After removing the ruins, a third arch of similar span and rise was constructed between the same abutments, the material being rammed concrete. The thickness of the arch ring was, however, uniform, being 2.3 ft. The body of the arch consisted of 1 part Portland cement, 2 parts broken stone, 3 parts gravel and 3 of sand, but for the intrados and extrados a higher quality of concrete was used, that for the former consisting of 1 part Portland cement, ½ part broken stone, ½ part gravel and 1 part sand, whilst the latter consisted of 1 part Portland cement, 1½ parts broken stone, 1½ parts gravel and 2 parts sand. The total quantity of concrete in the ring was about 50 cubic yards. Two months after completion the centres were removed, during which time the arch was protected from the sun and frequently watered. The testing commenced three weeks after the centres had been removed. Failure took place under a load equivalent to 2.24 tons per foot run on the loaded half of the arch. The next arch to be tested was constructed on the Monier system, the span and rise being as before, while the thickness of the ring was 1.97 ft. at the springings and 1.15 ft. at the crown. The concrete used consisted of 3 parts of river sand to 1 part of slow-setting Portland cement. The centres were removed at the end of two months, and arrangements made for testing. Failure took place under a load equivalent to 3.09 tons per foot run of



the loaded half. Great difficulty was found in removing the ruins. The metal reinforcement was found intact, having bent, but not broken, at the points of failure.

The final experiments were made upon a steel arch of the same rise and span as the four preceding ones. This consisted of two steel ribs fixed at 5.9 ft. centres and rigidly braced together. Each rib was of girder section 12.6 in. deep. The total weight of the steel work was 15.6 tons. On testing with a load of 82½ tons distributed over half the arch, no serious deformation was observed. The load was then removed, and on the next day 158 tons of rails were piled up on the loaded side. The deflection was then considerable, but agreed well with the calculated result. This load was left in place throughout one night, after which rails were piled on the side not previously loaded till a total of 175 tons was reached. The deflection was still further increased, but not a single rivet yielded. The load was then removed, and the experiments terminated. From their experiments the committee concluded that in arches of large span the calculations may safely be based upon the theory of the elastic arch. With a view to distributing the load as much as possible in the case of masonry arches, the extrados should be covered with a layer of ballast, which should be, at least, 3 ft. thick in the case of railway bridges. The safe crushing load on such arches may range from one-tenth to one-fourth the ultimate resistance of the material. — *Engineering*.



M<sup>R.</sup> A. E. DANIEL<sup>1</sup> has accomplished a useful task — a labor of love — in giving us a concise history of the churches of the City of London. His object has been to describe the style of architecture; where possible, to give a short history of the church and parish, and to add the dimensions and a list of the monuments.

Surely never was so fortunate an architect as Wren, for to whom else was the opportunity ever given to build a huge cathedral and forty-nine parish churches in the same city? And yet, in spite of the beauty of his churches, we go on demolishing them with the lightest of hearts, and build up, elsewhere, feeble imitations of thirteenth-century Gothic, or Lombard, or what not. Fifteen of Wren's buildings have gone already, and more are going; yet we prate about the Italians' vandalism, and we have a society for the preservation of ancient buildings, the members of which send advice *gratis* to the benighted foreigner. Why cannot Wren's work be rebuilt elsewhere, if it must be destroyed, instead of modern red-brick imitations of older buildings? So the world wags, and possibly the little fire-demon who arranged the destruction of London — the Loki of the seventeenth century, who played into the hands of England's greatest architect and made him famous — may yet see, from the nether world, the destruction of all his protégé's work. Or will the tide turn, and will our descendants prefer the originality of Wren, to the imitative faculties of the modern architects?

The great fire left eight churches more or less damaged, of which All Hallows, Barking, is one of the oldest, having belonged to the abbess and convent of Barking in Essex, founded at the end of the seventh century. It escaped the great fire in the narrowest manner possible; as Pepys relates in his diary, for September 5, 1666: "About two in the morning my wife calls me up, and tells me of new cries of fire, it being come to Barking Church, which is at the bottom of our lane. . . . But going to the fire, I find by the blowing-up of houses, . . . there is a good stop given to it . . . it having only burned the dyall of Barking Church, and part of the porch, and was there quenched. I up to the top of Barking steeple, and there saw the saddest sight of desolation that I ever saw." The then lord mayor, Sir Samuel Starling, does not seem to have been the most generous of men, for, says Pepys, when his house was in danger and the next house burning, he "did give 2s. 6d. among 30" men who helped to put out the fire. The church contains several brasses, and at its font William Penn was baptized on October 23, 1644.

Not the least curious part of the City churches is the surname many of them possess, as, for example, St. Andrew Undershaft, the "shaft" being a may-pole of greater height than the church. Here is the monument, in terra-cotta, erected to the memory of John Stow, the historian of mediæval London, a man who after devoting himself to collecting all kinds of curious knowledge, which cost him "many a weary mile's travel, many a hard-earned penny and pound, and many a cold winter night's study," was allowed to drop into such abject poverty that he petitioned James I for a license to collect alms for himself. The letters-patent were published from the pulpits, and one munificent parish contributed 7s. 6d.; but although the license was renewed for a second year, poor Stow died miserably, "so that it is feared," says Strype, "the poor man made but little progress in the collection." The old priory church of St. Bartholomew the Great is well known, but it may not be equally well known that William Hogarth was baptized there. The family lived in the neighborhood, and the painter taking an interest in the rebuilding of the hospital, gratuitously painted six pictures upon

the staircase, representing Rahere's dream, and the monk laying the foundation-stone of his church. The present is an age of disillusion; and so we are told that the derivation of St. Giles Cripplegate, in spite of the saint being the patron of cripples and lepers, has nothing whatever to do with them, and that "cripplegate" is simply an Anglo-Saxon term for a covered-way in a fortification. It was an old church founded in 1090, but has been much restored from 1623 to our own times. It is a curious fact that a great many of the City churches were restored about that time, only to be consumed by the great fire a few years later. The carver of the altar-piece is thought to be the identical artist to whom we owe the colossal figures of Gog and Magog in the Guildhall. Two celebrities were connected with St. Giles — Bishop Andrewes was its vicar from 1588 to 1605, and John Fox, the martyrologist, was buried there. Sir Martin Frobisher, the explorer of the arctic regions, and a still greater man, John Milton, were also buried there; but no monument was erected to either of them until many years later. Oliver Cromwell was married there at twenty-one years of age to Elizabeth Bouchier.

A great many of the City churches possess handsome official staves, St. Giles's being of massive silver, surmounted by a model of the cripplegate. Daniel Defoe was born and died in the parish, but was buried in Bunhill Fields. In the churchyard may be seen a bastion of the old London wall measuring 36 feet in width and 12 feet in height — the most perfect fragment yet remaining; and hard by is the site of another curiosity, Crowder's Well. "The water of this well," says Strype, "is esteemed very good for sore eyes, to wash them with; and is said to be also very good to drink for several distempers. And some say it is very good for men in drink to take of this water, for it will allay the fumes, and bring them to be sober." If so, it is a pity we have it not in our times; but it must be allowed, also, that the plague made great havoc among the drinkers thereof.

The modern crowd which swarms in Bishop's Gate scarcely knows that great St. Helen's owes its foundation, possibly, to Constantine, in memory of his mother. It was a priory of Benedictine nuns; hence the peculiarity of its construction — two parallel naves, each 122 feet long; the nuns' choir being raised somewhat higher than the other. Crosby Hall, hard by, known to most visitors as a restaurant, originally formed part of Sir John Crosby's mansion, and one of St. Helen's monuments (and there are many) is in memory of the knight. It is an exceedingly fine altar-tomb with beautifully carved recumbent figures.

St. Catherine, Cree, is a majestic church in the Classical style, said, without sufficient evidence, to have been designed by Inigo Jones, and to be the burial-place of Hans Holbein.

The early history of St. Alban's dates back to King Offa, who is said to have had a palace in Wood Street; but the present church was rebuilt by Sir Christopher Wren. It is much modernized, and cannot compare, as regards woodwork, with All Hallows, Lombard Street.

St. Andrew's, Holborn, was the scene of the marriage of William Hazlitt and Sarah Stoddart, at which Charles Lamb was best man, and Mary, bridesmaid. "I am going to stand godfather," wrote Lamb to Southey three months later, *apropos* of another event. "I don't like the business. I cannot muster up decorum for these occasions; I shall certainly disgrace the font. I was at Hazlitt's marriage, and had like to have been turned out several times during the ceremony. Anything awful makes me laugh. I misbehaved once at a funeral. Yet I can read about these ceremonies with pious and proper feelings. The realities of life only seem the mockeries." In St. Andrew's, also, was baptized Benjamin Disraeli, at twelve years of age.

The monument to Inigo Jones, the builder of the Banqueting House, Whitehall, may be found in St. Benet's, Paul's Wharf.

One of Wren's most beautiful churches is St. Bride's, or Bridget, Fleet Street — a magnificent interior attached to an exquisite steeple, tapering up from story to story — respectively in the Tuscan, Ionic and Composite orders, and culminating in an obelisk and vane. Richardson, the prosaic novelist and rival of Fielding, was buried in this church.

Christchurch, Newgate Street, was originally the Church of the Grey Friars, which was begun by Queen Margaret, second wife of Edward I, and daughter of Philippe le Hardi. The queen was buried there, as was also Isabella, wife of Edward II, and Joan of Scotland, their daughter. All the monuments were destroyed at the dissolution, as effectually as the royal tombs at St. Denis. Another worthy who was laid to rest at Christchurch was Richard Baxter, the author of the "*Saint's Everlasting Rest*." It is at Christchurch that the "spital" sermon is preached to the lord mayor and aldermen, at which the Blue-coat boys are present in the galleries.

St. Clement's, Eastcheap, is celebrated as the scene of the lectures of Pearson, upon the Creed; and another noted man, Miles Coverdale, the translator of the Bible, was rector of St. Magnus, a church completed by Wren in 1676, the original building having been destroyed; but he was buried at St. Margaret's, Lothbury, where there is a beautiful carved-oak screen.

St. Mary-le-Bow has another beautiful steeple, light, elegant and original. It acquired the name, in its latin form "*De arcubus*," from the stone bows upon which it was built. "From the Latin title, also, is derived the name of the Court of Arches, which, before the great fire, held its sittings at St. Mary-le-Bow." It is now used

<sup>1</sup> "London City Churches." By A. E. Daniel.

for the confirmation of the election of bishops; and it is from this church that the saying comes as to the true and veritable Cockney—"born within hearing of Bow bells." Beneath the church is the old Norman crypt, formed of three aisles divided by massive columns.

St. Michael, Paternoster Royal, has a curious origin. It derives its second name from a lane named La Riole, which was inhabited by wine merchants who traded with the town of that name, near Bordeaux. It was rebuilt by Sir Richard Whittington, who founded the College of St. Spirit and St. Mary.

Most of these churches possess fine carved woodwork: pulpits with sounding-boards, the seats, the altar-pieces and font covers; and some of the wrought-iron work of the corporation pews is very noticeable.

Tradition says that the first Christian church in London was formed by Lucius, the first Christian king of "Britaine," in 179. He also formed an archiepiscopal see which endured until the coming of Augustine, who transferred the see to Canterbury. This ancient church was St. Peter, Cornhill, rebuilt by Wren, and of which Bishop Beveridge was rector from 1672-1704.

The most noble of Wren's churches is generally considered to be St. Stephen's, Walbrook, a circular domed crown supported upon an octagonal base. It has five aisles, of which the central one is the broadest.

Mr. Daniel's book is marred by some wretched illustrations; the line and chapter headings, giving little sketches of the churches, might pass, and the photographs are possibly as good as they could be, considering the difficulty of taking these semi-dark interiors, but some of the wash-drawings are lamentable, notably that of St. Magnus, which appears to be a "fancy" sketch as regards the warehouses; the steamer and small boat can only have come out of a toy-shop. Another protest might be made against the uncut, jagged leaves. Our fathers invented a delightful machine to cut the leaves of books, and rejoiced thereat, as trouble and dirt were avoided. Now, knowing better, we are returning to the tiresome rough edges, which cannot be turned over rapidly, and which attract the book's greatest enemy—dust. Alas! *c'est la mode!*

THE science of perspective<sup>1</sup> may be approached from two different standpoints—that of the architect, for whom it is a branch of the art of draughtsmanship; and that of the mathematician, who regards it as a department of descriptive geometry. The application of the scientific principles of perspective to architectural draughting requires the constant exercise of the imagination. Planes, lines, points and curves, traces and intersections the draughtsman must picture to his mind before they take on their real significance; and any text-book designed primarily for the draughtsman fails of its highest usefulness if it does not recognize this fact. It should, accordingly, as far as possible, explain at every step the bearings of the abstract rules and principles upon the pictorial representation of architectural forms. There should be also abundant illustrations of practical applications of these principles, in the form of problems approximating, as nearly as possible, to those of the architect's office, in which the student should be guided through every step from the first to the last. By some such treatment as this, life and interest may be given to the dry bones of the geometry of perspective, and the student be willingly led on and up to the higher refinements of the science.

A text-book for use in the class-room is a different affair. Here the end is disciplinary and educational first, practical only in a secondary way. Not only is the standpoint of treatment that of the mathematician rather than of the artist, but it is the blackboard rather than the drawing-table which is kept in view. The detailed applications, the solutions of special problems, the practical short-cut methods, may be left for development by the teacher, or for later mastery when the student has become a draughtsman in an office.

This is the point-of-view taken by the author of "*Principles of Architectural Perspective*." The few specific problems he discusses, though exclusively architectural, are of an elementary nature. The book is, as its title implies, a text-book of principles, rather than of applications. The draughtsman in search of a handy guide to perspective will look in vain through this little book for solutions of the specific difficulties he encounters. It will not tell him how to represent a recessed arch, a dome on pendentives, a circular cornice, or a Corinthian capital in perspective. The book has been conceived, like the same author's earlier one, "*Shades and Shadows*," primarily with reference to the class-room, and seeks merely to lay a solid foundation of geometrical principles. The explanations, problems and illustrations which are contained in its forty-two pages and eleven plates of figures, are, consequently, of a purely scientific and disciplinary character. It is doubtful if the fundamental principles of perspective could be more briefly and succinctly stated than in the introduction and first chapter. Particularly noteworthy are the author's brief discussion of the difference between the real and apparent horizons, his explanation of distortion in perspective drawings and of the parallelism of vertical lines, and the distinction made between vanishing traces, points and lines in space and their perspectives in the drawing. The discussion of these points indicates the thoroughness and accuracy of the author's

own mastery of their relations. One may, however, question the necessity of carrying into the wording of the rules given in the first chapter, the distinction between the real vanishing-points and traces and their perspectives. It would have been quite sufficient to explain that, in the absence of contrary statements, the words "vanishing-point," "vanishing-trace," "horizon," refer to the perspectives in the drawing, not to the points and lines in space. This simplified expression would improve as well as shorten §§30-34 on page 9. There are a few other cases where the wording might be changed to advantage; and defective proof-reading has occasioned a number of errors which in later editions will, doubtless, be corrected.

Chapter II is devoted to the fundamental geometrical problems involved in perspective drawing. These are nine in number, and are treated with the same brevity which marks the preceding chapter. We cannot help feeling, however, that this part of the subject, always the most difficult to make presentable and attractive, has here been made unnecessarily dry. The system of notation employed is logical, but does not appeal to the eye, and is in this respect inferior to that of Professor Ware's "*Modern Perspective*." The lettering is always a bugbear in geometrical study, and every device should be employed in a text-book to lighten the weary search for  $B^H$ ,  $SP^V$ ,  $v^\infty$ , etc., among a maze of lines and letters. The various classes of lines can be differentiated by different methods of breaking, dotting or shading them; the notation may be so devised as to appeal instantly to the eye, and too frequent reference to mere letters and numbers avoided by describing the lines or points required, so that they are instantly recognized. This requires an increase in the number of words used, but words are not objectionable when they facilitate understanding. In this respect Chapters III, IV and VII, as well as II, leave something to be desired. Chapter II is otherwise a masterpiece of condensation.

The following chapters discuss in turn the method of the "Revolved Plan," "Direct Methods of Division," "Curves and Distortions," "Roof-lines and Parallel Perspective," "The Method of the Perspective Plan" and "Shadows in Perspective." It is hard to imagine how so much information could be conveyed in fewer words than in these chapters. They are as condensed in style as they are comprehensive in range. Chapter VII is open to criticism for its disparagement of the method of the perspective plan, to which it gives less than a page of text. The other two pages are devoted to the subordinate problem of laying off dimensions on perspective lines, which might better have formed a part of Chapter IV. There is no recognition of the usefulness of this method when the complete plan is wanting, and the design is such as to facilitate laying out perspective plans of the two visible faces of the building at different levels. The chapters on "Curves and Distortion," and on "Shadows in Perspective" are, on the other hand, in spite of their brevity, very useful, suggestive and well handled. It is, doubtless, through mere oversight that the word "shadow" has been omitted after "perspective" in the second line of §135.

The drawing of the figures deserves commendation for its precision, clearness and force. The plates all open out beyond the margin of the pages of text, making reference easy for any figure. The small size and compactness of the book, clean type and good margins, make it exceptionally handy and comfortable to use. It is an excellent text-book for classes under competent instructors, and for ambitious and faithful home students who have a foundation of geometrical training. We cannot help feeling, however, that the book might have been made available for a much larger class of readers if the pedagogic and mathematical point-of-view had been less closely adhered to. There are ten, perhaps fifty, young men outside the architectural schools to one in them, who would welcome a really scholarly, and yet compact, practical treatise on perspective, less expensive and formidable than Professor Ware's, more thorough than other existing manuals, and to them this work in hand will hardly appeal. We wish Mr. Lawrence might follow it up with a sequel or supplement, taking up a few actual and typical problems such as the architect has to handle in practice, and leading the student by successive plates through all the operations of their solution, up to the completed drawings.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE CHICAGO ACADEMY OF SCIENCES, LINCOLN PARK, CHICAGO, ILL. MESSRS. PATTON & FISHER, ARCHITECTS, CHICAGO, ILL.

[Gelatin Print, issued with the International and Imperial Editions only.]

DETAILS OF THE RHODE ISLAND STATE-HOUSE, NEWPORT, R. I. MEASURED AND DRAWN BY MR. P. G. GULBRANSON, ARCHITECT, BOSTON, MASS.

IN 1739 the General Assembly authorized the building of a new Court-house at Newport, and the structure now known as the State-house was soon after begun from drawings by Richard Munday. It was ready for occupancy in 1741.

<sup>1</sup>"*Principles of Perspective*." By Wm. H. Lawrence, Instructor in Architecture, Massachusetts Institute of Technology. Boston. 1896.

The basement, the steps giving access on three sides to the ground floor, the quoins and sills are of stone; the other decorations of wood. The walls are of brick.

The building was neglected during the Revolution, but after the war it was restored in accordance with the original designs.

The Representative's Chamber has been materially altered, but the Senate Chamber still remains as originally built. This room is wainscoted from floor to ceiling and on the west wall there is a portrait of Washington by Stuart. (The above notes are taken from "Mason's Reminiscences of Newport.")

A drawing of the pillory has been added as a curiosity; this instrument has found a resting-place on the tie-beams of the roof, and had been long undisturbed, as the accumulation of dust showed when the writer measured it.

THE SENATE CHAMBER: RHODE ISLAND STATE-HOUSE, NEWPORT, R. I. MEASURED AND DRAWN BY MR. P. G. GULBRANSON, ARCHITECT, BOSTON, MASS.: FOUR PLATES.

[The following named illustrations may be found by reference to our advertising pages.]

THE PULPIT IN THE OLD MEETING-HOUSE, SANDOWN, N. H. MEASURED AND DRAWN BY MR. J. A. LANE, BOSTON, MASS.

This type of pulpit, with the clerk's desk below, is a very unusual one in this country and seems to mark this building as a piece of true Colonial work, though it has not been possible to fix the date for the structure. The building itself is not large, covered with a simple pitch roof, without tower or steeple.

ENTRANCE DOORWAY AND DETAILS OF THE SAME BUILDING.

THE WEST CHURCH, BOSTON, MASS. MEASURED AND DRAWN BY MR. A. C. FERNALD, BOSTON, MASS.

This building which was until recently a Unitarian Church, is believed to be the work of the well-known early architect Asher Benjamin, at least his name appears in the parish rolls as a member of the society and it is a fair inference to assume that he designed the building. During the last year the interior of the building has been very slightly altered to adapt it for use as a branch of the Boston Public Library, the changes being carefully made under the charge of Messrs. Fox & Jenney, architects.

SIDE ELEVATION OF THE SAME BUILDING.

[Additional Illustrations in the International Edition.]

VILLA OF M. HENRI PARENT, ARCHITECT, VAUGRESSON, SEINE-ET-OISE, FRANCE: ENTRANCE FACADE.

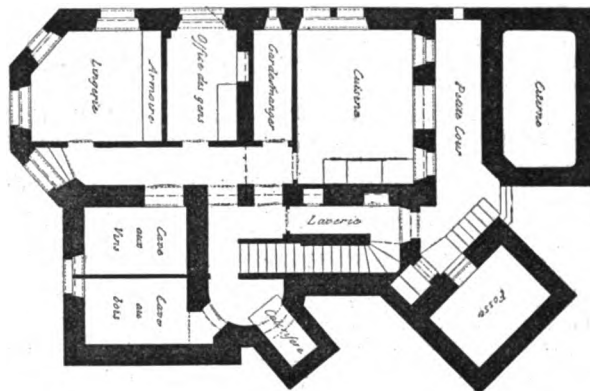
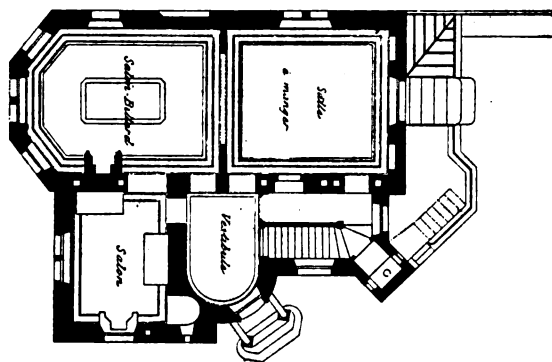
[Copper-plate Photogravure.]

Few things are more really interesting to study than the houses which architects build for themselves. If in each case the architect had abundant means to carry out his ideas, one might expect to find each dwelling an ideal creation and a proper measure of its designer's real force as an artist. Unfortunately, the architect who builds for himself is as much hampered and worried by the niggardliness of his client as if he were working for the veriest stranger. Hence it is, that architects' houses are rather small and convenient snuggeries than real architectural creations. Like other

clients, they have to yield to the cogency of figures and the result usually is that an architect's house is the mere whimsical presentation of the designer's pet ideas, much mutilated and restricted by force of circumstances.

It is not often that an architect passes his seventy-fifth year before he builds his own house and, rejoicing in the opportunity of breaking away from the safe path of rule and formula, sets out to indulge his own whims and fancies. Just what direction would be taken by such a venerable practitioner, whose work for decade on decade had run the gamut of the styles of Louis XIV, XV and XVI, no one could safely predict, and the result as shown by the plates and cuts is all the more interesting. Picturesqueness first, and a

proper and health-giving orientation of the rooms seem to have been the guiding motives in the designing of this structure in which the happy designer hopes to spend his declining years, and which in a



spirit of filial piety he has named after his long dead father, "Castel Aubert."

THE STUDIO FACADE OF THE SAME BUILDING.

[Copper-plate Photogravure.]

ANOTHER VIEW OF THE MAIN FACADE.

[Copper-plate Photogravure.]

CONVALESCENT HOME FOR FIFTY BEDS, LLANFAIRFECHAN, NORTH WALES: TWO PLATES. MR. THOMAS BOWEN, NANTWICH, CHESHIRE, ARCHITECT.

This building, the cost of which is being wholly defrayed and endowed by Messrs. Robert, Arthur and James Heath, the proprietors of the Biddulph Valley Coal and Iron Works, near Stoke-on-Trent, Staffordshire, is being erected for the benefit of the workmen of North Staffordshire. The site is the Penmaenmawr Road, about a quarter of a mile from Llanfairfechan Railway Station, a beautiful sheltered spot under the range of Penmaenmawr Hills and overlooking the Isle of Anglesea, the Menai Straits and the Irish Sea. The building comprises a three-storied block, containing day-rooms and dormitories for fifty beds and matron's rooms; and advantage has been taken of the quick fall of the ground from south to north to construct a basement floor, containing dining-hall, billiard-room, kitchens, etc. The building will be served and heated by hot water throughout, and lighted by electricity. A laundry and cottage is also being provided. The external walls are of local stone, with Cefn stone dressings and lined with bricks.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

"NOTCHED AND BUILT BEAMS."

NEW YORK, March 7, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Mr. O. A. McMeans's letter, referring back to the discussion in regard to the position of notched beams, leads me to repeat what I think was published as the result of the discussion at the time, viz., that the position "A," the one assumed by me, was based on Weisbach's theory, which certainly seems plausible, viz., that the beam acts as a whole, the lower half of beam in tension and the upper half in compression, and consequently the girder should be placed in the position I have shown.

A model made by me (at the time of the discussion) convinced me that, while the theory was apparently all right, its practical application was incorrect, and that the opposite position to that shown in my book is the better one. It is evident that at first, at least, the two parts act separately, the top of both the top and lower halves of beam in compression, while the bottoms of both upper and lower halves are in tension. That theory which, as I have said, is borne out by practical models, would necessitate placing the girder in the position shown at "B," or in the opposite position from that called for in my "Safe Building."

This is fully borne out by Mr. McMeans's model and the interesting table with which he accompanies his letter.

Yours very truly, LOUIS DECOPPET BERG.



BALTIMORE, MD.—The Walters Art Gallery will be open to the public on all Wednesdays till May 1, on all Saturdays in April, and on Easter Monday.

BOSTON, MASS.—*Paintings recently purchased; the Martin Brimmer Pictures; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt:* at the Museum of Fine Arts.

*Paintings by New England Artists:* at the Jordan Art Gallery, 450 Washington St., until June 1.

*Loan Collection of Portraits:* at Copley Hall, Clarendon St., March 2 to 23.

*Photographs by Miss Emilie V. Clarkson:* at the Boston Camera Club, 50 Bromfield St., March 4 to 14.

*Paintings by Boston Artists:* at the St. Botolph Club, March 10 to 21.

*Water-colors of Flowers by Paul de Longpré, also, Bronzes by Edward Kemeys:* at Williams & Everett's Gallery, 190 Boylston St., until March 14.

*Works by Swedish Artists:* at the Boston Art Club.

*Drawings by George Du Maurier:* at James M. Hart's, 220 Boylston St., until March 21.

BRIDGEPORT, CONN.—*Second Annual Exhibition of Pictures:* at the Public Library, January 25 to March 15.

CHICAGO, ILL.—*Works by Gustave Doré:* January 21 to March 21, *Annual Exhibition of the Cosmopolitan Club:* March 11 to 31, at the Art Institute.

*Ninth Annual Exhibition of the Chicago Architectural Club:* at the Art Institute, March 27 to April 8.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Pictures by J. B. Jongkind:* at the Durand-Ruel Galleries, 389 Fifth Ave., March 7 to 21.

*Pastels and Water-colors by Edwin A. Abbey:* at the Avery Galleries, 388 Fifth Ave., March 9 to 21.

*Paintings by Arthur B. Davies:* at the Macbeth Gallery, 287 Fifth Ave., March 9 to 21.

PROVIDENCE, R. I.—*Exhibition of the Providence Art Club:* opened March 4.

WASHINGTON, D. C.—The Art Gallery of Thomas E. Waggaman will be open to the public on Thursdays during March and April.



SEWAGE DISPOSAL AT PARIS.—Very extensive sewerage works have been in progress in Paris during the past few years, and will be brought to a conclusion by the year 1899. The governing principle has been in the first place to totally prevent all untreated sewage entering the Seine, and in the second to adopt in its completest development the system of water-carriage, which, as originated in this country some 60 or 70 years ago, raised the ire of German chemists, who complained of the waste of manurial material. At the present moment the discharge from the Paris sewers amounts on the average to 590,000 cubic yards per day, though this value may vary 20 per cent, more or less, without taking account of exceptional storms. For purifying the sewage, irrigation-farms have been laid out, the first of these, that on the peninsula of Gennevilliers, dating from 1869. Progress was then interrupted by the war, but since then the area at this spot treated has been greatly extended, and now amounts to very nearly 2,000 acres. The land treated was originally an arid sandy waste, the value of which is said to have been increased fivefold by the process, being now cultivated as kitchen-gardens. This land, it should be stated, does not belong to the municipality, but to private individuals, to whom the sewage is delivered on demand, the flow to the land being entirely under the control of these proprietors. All sewage not required by them flows direct to the Seine. As an average these lands at Gennevilliers take about 117,000 cubic yards per day, with a minimum of 65,000 in February and a maximum of 170,000 in June; the average corresponds to covering the soil to a depth of about 9-16 inch

every day. The whole of the remaining sewage, amounting to about four-fifths of the total, has up to the present been turned direct into the Seine. As regards frost, it is stated that even during the heavy and long-continued frost of last year, the supply to the land in February did not fall sensibly below the average, although during this period only about one-sixth of the area in question was irrigated at any particular time. The success attained here has been so great that the Paris Municipality determined to extend the system, and acquired powers for treating another 2,000 acres in the peninsula of St. Germain. This work was completed in July last year, and a quantity of sewage amounting to 53 cubic yards per acre per day is thus disposed of, or about 106,000 cubic yards in all. An aqueduct  $8\frac{1}{2}$  miles long was constructed specially for this work, its dimensions being fixed with a view to passing in the future nearly double the present total sewage of Paris, it being intended to prolong it to other irrigation-farms farther on. Included in the work is a siphon under the Seine, in constructing which the shield system of tunnelling was employed. This was described in *Engineering*, Vol. lix., page 529. The farm at St. Germain belongs to the city, but is occupied and worked by private parties, who are simply bound to take not less than 19,000 cubic yards per acre per annum. In this way about half the present output of the Paris sewers is satisfactorily provided for, and during the next three years the remainder will be dealt with in a similar fashion. Powers have been acquired for delivering sewage to another 12,356 acres, still farther down the valley of the Seine. The whole of this land will not, of course, be required immediately, but provides ample accommodation for a very large increase in the present sewage discharge of the city.—*Engineering*.

OYSTER-SHELLS AND WESTMINSTER ABBEY.—There is a singular feature in the early mason work of Westminster Abbey, which I have not seen reference to in any history of that famous abbey. When removing or repairing any of the more ancient stonework of the abbey, it is always found that the large stones are set or levelled with oyster-shells. This, I am informed, is peculiar to Westminster Abbey. I have in my possession two or three of those oyster-shells which were found during alteration in the oldest portion of the Abbey. They are very flat and thick, measuring four and a half inches in diameter, and retain the small shell incrustations on the outside. It will be interesting to know whether there is any tradition associated with such an unusual use of the oyster-shell. The story of the Abbey's foundation points to its association with fishermen. The tradition is that Sebect, having determined to build a Christian temple and dedicate it to St. Peter, asked Militus, first Bishop of London, to perform the dedicatory ceremony, but St. Peter himself anticipated him in the performance of it. On the Sunday night, the eve of the intended consecration by the Bishop, a fisherman of the name of Edric was casting his net from the shore of the island in the Thames; on the other side of the river a bright light attracted his notice. He crossed and found a venerable personage in foreign attire calling for some one to ferry him over the dark stream. Edric consented. The stranger landed and proceeded at once to the site of the church. The air suddenly became bright with a celestial splendor, and the church stood out clear and beautiful; a host of angels descended and re-ascended with sweet odors, and flaming candles, and assisted in the dedication of the church in the usual solemnities. The fisherman was so awestruck by the sight that when the mysterious visitant returned and asked for food he was obliged to reply that he had not caught a single fish. Then the stranger gave him his name: "I am Peter of the Keys of Heaven. When Militus arrives to-morrow, tell him what you have seen, and show him the token that I, St. Peter, have consecrated my own church of St. Peter's, Westminster. For yourself, go out into the river; you will catch a plentiful supply of fish, whereof the larger part shall be salmon. This I grant on two conditions: first, that you never fish on Sundays; secondly, that you pay a tithe of them to the Abbey of Westminster." The legend was fully endorsed by King Edward the Confessor, who rebuilt the Abbey, and recited in his new charter the miraculous consecration by St. Peter. And this dedication by St. Peter, the patron saint of fishermen, led to the offering of salmon upon the high altar, the donor of which had the privilege of sitting at the convent table to dinner. Whether the oyster was also presented as an offering at the altar, and afterward used at the refectory table, tradition is silent. There, however, remains the fact that oyster-shells were extensively used in the building of the Abbey whose foundation was laid and consecrated by the patron saint of fishermen.—*Notes and Queries*.

THE ROYAL GOLD MEDALLIST FOR 1896.—The council of the Royal Institute of British Architects have, it will be generally conceded, made a felicitous choice in recommending that the Royal Gold Medal for the current year be awarded to Mr. Ernest George. The nomination will be as heartily approved by the profession generally as it was received when announced on Monday evening. A long and notable series of domestic buildings, beginning with Rousdon, Devon, and including in the country the mansions of Motcombe, Dorset; Poles, Herts; Woolpits and Dunley Hill, Surrey; Shiplake Court and Rosehill, on the Upper Thames; Beechwood, Kent; Batsford, Gloucestershire; and Buchan Hill, Sussex; and in London houses in Grosvenor Place, Cadogan and Berkeley Squares, Collingham and Harrington Gardens testify to Mr. George's skill as a house-planner, as well as to his dexterity in picturesque grouping and his fresh detail, while, as the exhibitions show, he is equally facile and vigorous as a sketcher with pen, pencil, etching-needle or sepia and water-color brush. His confrères in the profession so persistently treat Mr. George as a young and rising man with a promising future before him, that it is difficult to realize that he is in his fifty-seventh year, yet a generation has passed away since on the completion of his articles with the late Samuel Hewitt, of the Adelphi, he entered into partnership with Thos. Vaughan, also long since deceased. A portrait of the gold medallist nominate was published in our issue of January 3, 1890, and most of his more important works have been illustrated in our pages.—*The Building News*.



Entered at the Post-Office at Boston as second-class matter.

MARCH 21, 1896.



## SUMMARY:—

Close of the Hearings on the Preservation or Destruction of the Bulfinch Front.—Will the Legislature be Patriotic or "Business-like?"—The Periphrasings of the Heine Monument Scheme.—Death of A. J. Post, Engineering Contractor.—The Attempt to Place a Statue of Marquette in the United States Capitol.—New Rules of the French Government affecting School-houses.—Some of their Provisions.—Report on the Reclamation of the Zuider Zee. . . . .	125
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CAN any one enumerate the crimes that in this country have been perpetrated by legislative bodies under the allegation that they were acting like "common-sense business men?" The protracted hearings on the three bills which affect the destruction, alteration or preservation of the Bulfinch portion of the Massachusetts State-house are closed, but who can say now which way legislative action will face? Will the few men who now constitute the Legislature arrogate to themselves the right of deciding that future generations will prefer to have new bricks, mortar and other materials, cast in another form, another garb, replace and stand for a structure now redolent of historical, sentimental and architectural impressions, feelings, memories? Will they presume to say that new bricks, mortar, etc., are as good, and better, when it comes to impressing on future generations the impalpable truths of history, sentiment and architecture, as these which stand here now clothed with the associations of a century's growth? Will they accept as good teaching and conclusive proof of the civilized and intellectual position that Massachusetts holds, as one of the largest, most civilized and most intellectual communities of the nation, that extraordinary argument of the introducer of one of the bills, the one which authorizes the destruction and an amorphous reconstruction of the building, who, while vehemently objecting to be considered a "vandal," declared that the true way to honor and preserve the name of Bulfinch—and he, even he, would like to have it honored and preserved—was to positively annihilate Bulfinch's actual work (which is abundantly good to last another century) and then spend in honor of Bulfinch, and as a declared memorial of his fame, a million and a half in reproducing—on changed lines, in new materials, with altered dimensions and new features, be it understood—the present State-house! Could anything be more business-like and commonsensical? Could anything be less patriotic, less civilized, less sentimental, less artistically appropriate?

NEVER have the advocates of the destruction of the Bulfinch portion of the State-house presented a weaker case than at this year's hearings. They have adduced at the several hearings almost absolutely no evidence of popular or

individual approval of their recommendations. The sponsors of the several vandalistic measures have advocated them almost unsupported. They have over and over again been forced to admit that the present building can be retained and made permanent, and this at a tithe of the charge upon the present and future generations called for by their own schemes. Their one claim to a standing is the allegation that they alone, of the hundreds who have attended the hearings, possess "common-sense" and are "business-like." If their views are to prevail, we beg that the members of this present Legislature may carry common-sense methods to a logical conclusion. Let them start, from this year of grace, a new era in history, sentiment and art. Let them decree the destruction of Faneuil Hall, King's Chapel, the Old South, the Old State-house, Bunker Hill Monument, etc., so that their common-sense future may have no connection with our sentimental and historic past. We sentimentalists have observed that the possession of these useless, unused, unpractical, "unbusiness-like" structures bring annually a considerable income to the citizens of the State by attracting visitors; but visitors, retail trade, hotel and railroad interests are possibly only sentimental considerations which the future need have no care for. Those who have been wont to rejoice at the beauty of the Granary burying-ground or muse over the relics in God's half acre alongside King's Chapel can in the future be business-like enough to be content with a bronze tablet in the vestibule of a department-store. Whatever you do, gentlemen of the present Legislature, do thoroughly, and rest content that your names shall not be forgotten, even in the records of a common-sense future. Your course cannot be predetermined: it is, like "all Gaul," divided into three parts. Either appropriate sufficient money—no matter how much may prove to be needed—for positively and permanently repairing and preserving the present building, the course which is demanded by every consideration except those of alleged common-sense and business, or have done with the past and start a new historic and architectural era from to-day with an appropriation of \$6,000,000. On no pretext whatever allow yourselves to waste a million and a half of the State's funds in an attempt to rebuild Bulfinch—with improvements. We are sure that even the architect of the annex—to his honor be it said—is in his private feelings in accord with the sentiment that desires the preservation of the present building.

THE Heine fountain has not ceased to give trouble to the citizens of New York. A short time ago, the Board of Aldermen voted, by a majority of nearly five to one, to accept the monument, and place it somewhere in the northern part of the city. This is, however, by no means the end of the matter, for, as it appears, a statute has just been passed by the State Assembly, providing that no piece of statuary shall be accepted by the city without the consent of the Mayor, the President of the Department of Parks, and the Presidents of the National Sculpture Society and the Municipal Art Society. This law, to become operative, must, it appears, be accepted by the city authorities, and a hearing on it was going on in the Mayor's office at the very moment of the vote by which the Aldermen decided to accept a work already condemned by at least three of the dignitaries whose consent is by the new law made necessary to complete such acceptance. What will be the outcome of the struggle, no one can say. If the new law, which is known as the "French law," should be accepted by the city, the fountain will, apparently, be finally shut out from public ground within the city limits; if not, the Park Commissioners will probably compel its seclusion in some unfrequented place, as the best they can still do for the public interest. Without criticising the owners of the monument, it certainly seems a pity that, after the flattering offers which, as they say, they have had from other towns, they should insist on driving it down the throats of the people of New York; but it is, perhaps, as well that the question should be now decided, whether the adornment of the public places in the city shall be put under the control of persons who know something about such matters, or not.

MR. ANDREW J. POST, the senior partner of the well-known firm of Post & McCord, engineers and contractors for ironwork, died a few days ago at his home in Jersey City. Mr. Post was born in Montpelier, Vermont, his father

Simeon S. Post, being one of the most distinguished civil engineers of his time. Young Post, after his school days were over, was apprenticed to a machinist, and, after thus gaining a practical knowledge of the handling of iron, began to devote himself to engineering problems, under the tuition of his father, choosing particularly the designing of iron bridges and similar structures. In 1876, after nearly twenty years of successful practice as a designer of bridges, he entered into partnership with Mr. McCord, as a contractor for iron structures, as well as a designer of them. The rapid development of iron building found them ready, and thoroughly prepared, to assist in this great work, and the firm was soon engaged in construction on a large scale. Many architects, who have profited by their judicious counsel, remember with pleasure their relations with Post & McCord, and, both as engineers and contractors, the firm rapidly acquired the highest reputation. Busy as Mr. Post was, he found time to interest himself in other people's welfare, and was an active member of many clubs and societies, as well as of the American Society of Civil Engineers.

**A**N extraordinary commotion has arisen over the gift to the United States, by the State of Wisconsin, of a statue of Father Marquette, the discoverer of the Mississippi River. The figure has been placed in the Capitol, where its missionary robes certainly present a striking contrast with the costumes of President Lincoln and Gen. Philip Kearney, between whose statues it is deposited, although the effect is hardly so overpowering as to justify the remark of a member of Congress, who is said to have declared that "Now the only thing necessary to give the Capitol the appearance of a complete cathedral is to change the exterior but slightly, by removing the Goddess of Liberty from the dome, and substituting a figure of St. Peter." Nevertheless, although it would take a good deal more than one statue in priestly robes to make the Capitol look, to ordinary eyes, anything like a cathedral, a member of the House from Michigan made a good point in calling attention to the fact that the Statutes of the United States provide only for the reception, in the Statuary Hall of the Capitol, of not more than two statues from each State, "of deceased persons who have been citizens thereof, and illustrious for their distinguished civic or military services." It is certain that Father Marquette was never a citizen of the State of Wisconsin, nor was he illustrious for distinguished civic or military services, and it is plain that, however worthy his exploits and virtues are to be commemorated by a statue, that statue is not entitled, under the plain and well-considered limitations of the law, to a place in Statuary Hall. However grateful we may be to the noble Catholic missionaries who began the civilization of the Mississippi Valley, the place to show that gratitude is not in the Statuary Hall of the Capitol, which is expressly and designedly reserved for memorials of citizens and soldiers of the United States, and the sooner it is removed the better.

**T**HE municipal authorities of the City of Paris have just issued a new code of rules for the government of architects in designing school buildings, which have a certain interest, as being the latest expression of French opinion on the subject. As France is now spending a great deal of money on school-houses, and is obliged to make what it has to spend go as far as possible, it is not surprising to find that the rules call for the strictest economy in everything not essential to construction. Cut stone is to be used as sparingly as possible, walls above ground being required to be of brick or "moellons," answering, perhaps, nearly to our coursed rubble. On the fronts, the "moellons" are generally to be roughly dressed to a face, but walls facing on court-yards or playgrounds may be plastered. Floor-beams must be of iron, avoiding too great spans, and filled-in with deafening of the most economical description. A curious provision is that separate specifications must be made for each part of the work, so that the building may be erected under successive contracts, following each other in the order in which the several portions of the work succeed each other in building. In this country, such an arrangement would be viewed with suspicion, as a scheme for awarding the first contract at a low price, to some favored individual, and managing matters so as to throw all the succeeding contracts into his hands, on profitable terms; but the French idea seems to be to afford in this way a means for

checking off, so to speak, the cost of the building at intervals during its progress, by comparing the actual cost of the different portions of the work with the estimates. Architects are enjoined to be sure to include everything in their specifications, from the footing-stones under the walls to the gas and water meters and stationary desks, and not to forget to mention the sodding and planting around the building; but, in addition to this, they are directed to provide in their estimates a special allowance for contingencies.

**I**N the arrangement of the school-buildings, architects are required, as is usual in France, where children are much rougher in their play than with us, to provide separate entrances for boys and girls. Where a school for younger children is included in the group, the entrance for these children may be the same as that of the older girls, but the older boys are never to use the same entrance as the little children; nor is it allowed even to have the windows of the class-rooms occupied by the older boys or girls overlook the playground of the younger children. In the interior, partitions must meet with a bevel or a round corner, and the angle between walls and ceilings must be curved, with a radius of four inches. This is a common French provision, to facilitate dusting and washing the walls and ceilings, but it must add appreciably to the cost of a school-building. However, the regulations provide for rigid cleanliness everywhere. Even the benches of the parents' waiting-room are required to be hinged, so that they can be turned back against the wall, and the space under them washed out on occasion. Corridors and passageways leading to the class-rooms must not be less than a metre and a half wide, — about five feet, and must in all cases receive light and air from the outside. Stairs for the use of the children must have straight runs, with square landings, no winders being permitted; and no stairway must have more than fifteen steps without a landing. Stairs must be at least fifty-four inches wide, and the rise of each step must not exceed six and one-half inches. Stairs may be of iron or wood, but must in either case be fireproofed with mortar filling. Hand-rails must have projecting knobs, spaced about one metre apart; this provision being evidently intended to discourage the practice of "sliding down the banisters" which so strongly allures the infant mind. In schools for young children, all stairs must have a second handrail, on the wall side. Buildings containing more than four class-rooms in any story, or more than eight class-rooms in all, must have a secondary staircase, at the part of the building most remote from the principal stairs. It is, however, permitted to leave out this secondary staircase, where ready communication can be provided between two adjacent school-buildings.

**C**LASS-ROOMS must be rectangular, and must be planned to accommodate not more than fifty pupils, with at least one square metre, or about eleven square feet of floor-space for each pupil. The height must be thirteen feet, from floor to ceiling. Lighting may be either unilateral or bilateral, according to circumstances, but, with unilateral lighting, the light must come from the left of the pupils, and the width of the room must not exceed twenty-one feet; and in this case, also, openings for ventilation must be made in the wall or partition opposite the windows, occupying the whole of the wall-space above the level of the tops of the doors. All windows must extend to within eight inches of the ceiling, and no ceiling-light is allowable in class-rooms.

**T**HE Commission appointed by the Dutch Government to study the question of the reclamation of the Zuider Zee has just sent in its report, which is signed by all the members. It considers the scheme practicable, although it will require the construction of a dike nearly forty miles long, and thirty-one years will be needed for constructing the dike and pumping-out the water. The cost, including compensation to the fishermen, is estimated at six hundred and fifty-six million francs, and the value of the land reclaimed at six hundred and eighty millions, leaving a balance of twenty-four million francs, or less than five million dollars. This is a profit of only about three and one-half per cent, even if the estimates are not exceeded — a very narrow margin for an undertaking involving so much uncertainty.

EVERY-DAY ITALY.<sup>1</sup>—III.

VENICE.



On the Grand Canal.

the gray-brown cities of the North? All phrases must seem the veriest peribole. Venice is a shattered rainbow, built into a city.

Imagine, if you can, tints of pearl and of faint flesh-color, pinks like the inside of a sea-shell, greens, gray and ghostly, pale sapphire, tender violet, with now and then a red or brown or blue as deep and thick as velvet. Weave them all into a ribbon of color, adorning forms more beautiful still, and conceive the whole mirrored and multiplied in rippling sea - green water, underneath a sky blue "as my lady's eyes," where flocks of feathery clouds chase one another all day about the horizon, and at evening become iridescent in a death agony, as night overwhelms them. A night more exquisite even than the day, when the sky puts on a mantle of deep ultramarine, richer than any purple, embroidered over in strange figures with glittering, gem-like stars; when the lights, red, white and yellow, are reflected on marble palace walls and leave trails of liquid fire in the black void of water beneath, where sable gondolas, freighted with joyful life, and echoing song and laughter, appear from nothingness and vanish, as moths pass through a flame.

In Venice everything seems to labor under the beautiful necessity of being beautiful. Where, but there, does one see those pictur-

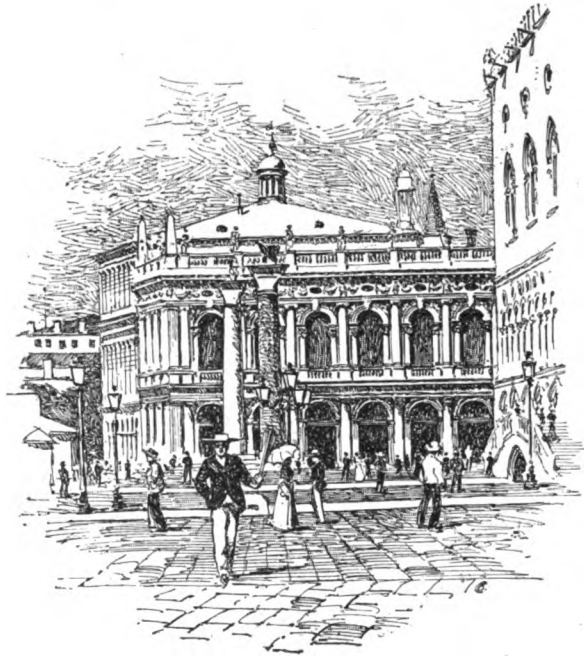
ALL writers have been eloquent in praise of Venice; all painters have tried to match with mere pigments the colors of her palaces and sunset skies; yet everything that I had seen or read was clean forgotten,—swallowed up in wonder—and during my first moments on the Grand Canal I suffered from a sort of indignation that no one had in any way prepared me for what I found there. I determined straightway to perform that office for others who should come after, not realizing then that the charm of the place is incommunicable; that men through all the centuries have tried to utter it, and I was witness to their failure.

How should one convey the idea of light to a blind man, or of such color as is there to dwellers in



On the Grand Canal: opposite the Museo Civico.

esque black boats with terra-cotta colored sails (so poor a word to name a red which is half yellow, and wholly exquisite)? Where else do they use for window curtains cloth of such a noble blue? In what other city are there noiseless streets with floating carriages, and cabbies dressed in spotless white with black and crimson sashes?



Library of St. Mark's.

I have seen a red awning patched with yellow and olive-green: not in all an artist's paint-box could be found two other colors to do as well. I have seen a black boat with an orange sail above it, while beneath the prow the water, which in a less favored harbor would have been a dirty brown, was of purest emerald.

One cannot have known the ultimate possibilities of color until he has been to Venice, for there color takes on the attributes and assumes the rank of music, stirring the emotions and awakening the memory. Ride the length of the Grand Canal in a gondola just as evening falls, and abandoning yourself to the scene, you may experience all those stirrings of dormant soul-potencies, those evanescent, unimbody longings which are not yet desires, those hopes too dear to be finished by fulfillment, and regrets too gentle for remorse, which until then you had believed music alone was capable of inspiring.

Then, when the red embers left by the sun in the west have flickered and gone out, when darkness begins to thicken on the water and the lights to twinkle out, and you become for the first time conscious of the diners in the café of the Grand Hotel, by reason of the interior illumination, land at the Piazzetta and wander up and down with the crowd on the Piazza, letting the music of the band set the theme for your imaginings. Continue to walk thus until you are drunk with multitude,—until you have experienced that strange form of intoxication which is perhaps the effect of the contact of your soul's *aura* with that of so many others—the clash of the impalpable with the impalpable. It is unlike any other form of stimulation, and to sensitive souls it is most dangerous and fascinating. Its victims are in every great city, and in none more than in Venice, where the conditions for indulgence exist in rare perfection. The great Piazza is clean and brilliant as a ball-room, and the crowd to be found there bigger, more cosmopolitan and more idle than in Paris, even. There are lean and swarthy Greeks, with comic-opera clothes and huge gold ear-rings, dusky Armenians and Turks with insolent, bold brown eyes; fat and spectacled Germans; Frenchmen, languid, elegant and perfumed; Englishmen, with faces ruddy as rare roast beef, and their women, fair, large-bodied and awkward, with lily necks and long, flat backs such as one sees in Du Maurier's pictures. The Americans, men and women, refuse to be summarized in a phrase, for though they are unmistakable in foreign places, they have not crystallized into a type. They are mostly of two classes, one represented by those oldish girls and youngish women who have taught



A Minaret from St. Mark's.

<sup>1</sup>Continued from No. 1054, page 109.



school all winter, or denied themselves necessities, perhaps, in order to purchase those costly and worthless trifles which one sees them bargaining for in the shops, and who travel for improvement rather than for pleasure, and the other, by all the well-to-do who go in for a good time: alert well-dressed men, and handsome, high-voiced shirt-waisted women, whose every act and attitude betrays the queenship of their sex in their own country, — so different from the subdued manner of European women in public places. But of all the people to be seen of an evening on the Piazza, none are more interesting than the Italians themselves. The infantry soldiers, so small and swarthy; the cavalry officers, magnificent in their tight uniforms and silver braid; the family groups of fat mamma and father, and flower-like daughters, whose self-conscious eyes look always decorously straight ahead; the callow youths and mashers, dressed in grotesque imitation of prevalent London and Parisian fashions, who at a little distance pursue these unattainable fair ones; the women of the poor, — fresh, brown-eyed, black-haired maidens, arm in arm with old and shrunken hags — a contrast showing with fatal

sweet drinks of which the Italians seem so fond. Forget the crowd as much as its noise and immanence will let you, and become conscious, instead, of the deep blue sky above you, and of the passionless stars; of the campanile, illumined by the lights of the Piazza, piercing the darkness like a flaming sword; and of that Aladdin's palace,



The Bridge of Sighs.

clearness the effect of years of work and child-bearing, for the horrid old crones were once black-haired and rosy and desired of men; weary, patient mothers, with children fretting at their skirts: *facchini* in blue clothes and with brass badges who spend their waking hours — which are not many — in devising and performing useless services for opulent *Inglesi*; beggars and boot-blacks in plenty, and members of that other lowest class of all, whose eyes are kept glued on the pavement, and the sight of whom always renews my determination not to smoke Italian cigars. Nor would the category be complete without including those women, unmistakable everywhere, from whom men buy brief pleasure and long-lived regret. Around and around the band-stand they all go, and you among them, just as they went for your father when he made the grand tour before you were born, and as they will go for your son, may be, when he has put off mourning for his father and can be decorously gay as befits his years.

When you are tired of all this, — and one gets tired even in Venice — find a place at one of the hundreds of small tables just outside the colonnade, and sit and sip strong coffee, or one of the weak,



In the Fondamenta Zornio.

Saint Mark's, whose domes, like bubbles, seem poised upon the air. Forget even the present, forget your very self, and summon up visions of the stirring, sumptuous past, and of all the dramatic scene which had the Piazza for their theatre. Summon them if you can more likely you cannot, but they will rise unbidden sometime as like the prince in Tennyson's "Princess," you will wander amid world of ghosts.

Having traversed the length of the Grand Canal, and spent some hours on the Piazza, you will have seen all that there is of Venice



Tower of St. Stefano.

many people will tell you. Such is, indeed, nearly all that the average tourist knows or cares about it. Some hours spent at the Academy, some minutes in Saint Mark's, a run through the Ducal Palace and over the Bridge of Sighs, and hurried and perfunctory descent upon the churches asterisked in "Baedeker," and his trunks are packed and he is off for Florence or the Italian lakes. But if you



would really know and enjoy Venice, see the Bride of the Sea in her boudoir, instead of in her ball-room; forsake the Piazza altogether, and the expensive, un-Italian hotels that line the Grand Canal, and find, instead, a room in some mouldering old palace that takes your fancy, on some quiet *rio* or *calle*, not too far from the



Tower of St. Nicolò dei Mendicoli.

heart of Venice, but far enough from its noise and bustle so that you may distinguish each muffled dip of the oar of the passing gondola and the lap of the tide against the weed-grown walls.

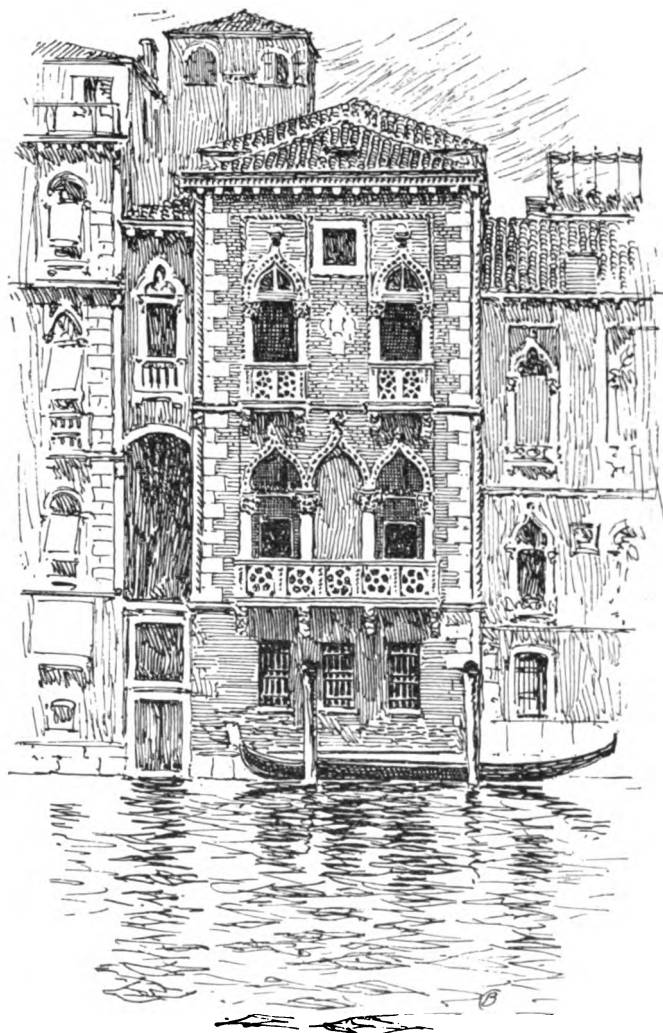
I found such a place at the end of the Via della Salute, within a stone's throw of the church of that name, whose spindling towers were visible from my window, and through the greenery of the garden in the rear I had a glimpse of the blue water of the harbor, a patch no bigger than my hand, but which I could have ill-spared from the prospect. To be sure, the Piazza was on the other side of the Grand Canal, but the *traghetto* brought it within five minutes. Instead of finding this crossing an annoyance, it formed an episode of every day which never lost its charm. In the morning, intent on business or pleasure, the brief glimpse it affords of so much loveliness, from one's black cradle near the water, was like grace before a meal, and returning, tired out at night, it was good to sit awhile on the marble church steps and let the calm serenity of night rest like a benediction on the soul.

Whatever be the state of your purse, you will do well to avoid those heavy and expensive *table d'hôte* dinners which are served at the hotels. Go rather to some little restaurant which looks clean and attractive, marked, if it all, by "*Baedecker*" as "second class," or "in the Italian style," and where the waiters speak no English, little French and very much Italian. There is such a one on the Fondamenta della Zattere, the same, beyond a question, that Symonds devotes some paragraphs to in one of his books on Italy. It is worthy of his eulogies, and cheap beyond belief. My appetite usually failed me before my bill exceeded two francs in amount. You may have your breakfasts in front of the hotel underneath an awning, in full view of all the life on the quay and in the harbor, and seasoned with all sorts of appetizing sea smells—salt and tar, and odors wafted to you from the holds of vessels from the other side of the world. By luncheon-time the sun will drive you indoors, or better, into the paved court-yard, completely covered over with green vines, through which the yellow sunlight filters down, like oil through a salad. As you eat you may be witness of the life of the place, which is a sort of Forum Romanum for three or four families. The children have a play-house in one corner and they chase one another around the old carved well-curb with shrill cries of "*Curri! Curri!*" and "*Basta! Basta!*" while their mothers gossip together as they perform their simple household duties. Two lean tortoiseshell cats and a little gray kitten will probably make their appearance simultaneously with the fish, and gaze up at you with hungry eyes, asking for morsels, which, if you proffer, they will as like as not refuse, in the quietly insulting way cats have. Young girls will appear at doorways, and shyly retreat at sight of you, if you are a stranger and well dressed. It is a great mistake to be conspicuously well dressed, and by all means keep your "*Baedecker*" deep hid in your pocket, because at sight of a "*Baedecker*" the Italians cease to be their sweet and natural selves and become mute and constrained, or servile, or clamorously importunate, according to their condition in life. These red-covered volumes are a symbol of wealth, and seem to arouse all the latent cupidity of a people whom excess of poverty and dearth of pride have made mendicant.

Your dinner will be served to you on a railed platform, built quite out over the water, so that you seem to be on the deck of a ship, with other real ships only a biscuit's-toss away. While you eat, the low sun slants its last beams across the Giudecca, bathing the towers and palaces in orange light; the shadows creep stealthily toward you along the quay; a great black vessel, like some huge leviathan, steams slowly out to sea; the water is like oil and every sound comes to you marvellously magnified; the dip of a distant oar sounds like the remembered last sob of a drowned man for whose death the sweet-voiced bells are tolling; the sun goes down in a fanfare of red and yellow clouds, and there are left only some streaks of bloody fingers in the west to tell of the departed day. Darkness draws veil after veil across the vision, and by the time you have finished your coffee and lighted your cigar, black night is all about you.

Oppressed with a subtle melancholy engendered by the scene, you flee for refuge to the gay, thronged Piazza and amid its lights and bustle, the burden of the sadness of a too-beautiful world slips from you for a time; but you cannot always as readily escape it. Just as Rome has its malaria, so Venice afflicts one with some nameless disease of the soul. What is more depressing than withered flowers, than the cold fragments of a feast, or any other of the relics of a bygone joy? Venice is a place of pleasure-houses fallen to decay. Florence was always stern and intellectual. Rome was, and is, powerful and grand, but the joy of life belonged to Venice, and when, in her fall, that fled away, it was as the soul which forsakes the body. Venice is like the bride found in the chest; her dress and jewels are as the day she put them on, but in place of the beautiful woman, a grinning skeleton looks out.

You feel nothing of all this on the Piazza, nor on the Grand Canal where the stream of life is strong and warm, but if you would experience what I mean, float or wander in the unfrequented ways, where sea-weed still stains the unfooted marble steps of palaces, where the traceried windows are boarded up, and the walls are cracked and crumbling to decay; look into little courts roofed now only by the open sky, where ruined staircases mount upward, not to sumptuous chambers, but to the noisome barracks of the poor; visit the



"House of Desdemona": Palazzo Contarini.

churches whose cloisters echo to the sound of bugles and the clank of spurs.

If you stay long in Venice, you are sure, sooner or later, to succumb to her mood. Like Vivian, she weaves a spell in which your consciousness is stimulated, but your power of performance is gone.

If you are a healthy and energetic American, with work to do, you will soon loose yourself and be gone; but I think there must be some who continue to live on and on, in dreamy lethargy, unable to bestir themselves, like Merlin in the wood. I have even fancied that I could identify them in the people I encountered on the Piazza. They sit very still all day over endless cups of coffee at Florian's, and at evening when the band plays they move up and down with the crowd. There is a spirit of dreamy good-nature, not unlike the condition of mind I have always fancied to be an opium-eater's. Seeing them, life seems unreal, and afterwards when you are hard at work in raw and ugly, but earnest and energetic America, Venice will seem unreal too—a dream that you dreamed once, and that you hope to dream again.

CLAUDE F. BRAGDON.

[To be continued.]

### VENICE TO-DAY: THE OTHER SIDE.

**W**HEN the train drew near, how eagerly I craned my head out of the window to catch the first glimpse of Venice, the Enchanted City! And this is what I saw: A stretch of yellow puddles, fringed by sour, arid grass; beyond that, a huddle of black chimneys vomiting out smoke; then a dingy confusion of dirty shipping, and beyond all, a gray scramble of warehouses and mean buildings. I rubbed my eyes and asked myself, Can this be "where Venice sits in state, throned on her hundred isles"?

We were hustled out of the station into a crazy gondola and paddled along the Grand Canal to our hotel. "So this is the Grand Canal!" we said, gazing at it in stony disappointment and sniffing at it suspiciously. It was infinitely dirtier than the Thames at

open sewer, with its unspeakable filth, be part of "that unsullied sea, with its eddy of green wave"? Was this "the golden city," paved with emeralds? How often afterward I wobbled along this same canal, and others equally terrible in their wan misery, going home always crushed and broken in spirit! Here is a description of what these canals are, taken from my diary, and it is literally truthful, which the poets and painters never are:

On either side staggers a crowd of decayed buildings; from the roof downward they are a mass of squalid ruin; broken balconies cling to the stained and discolored walls, great scabs of plaster have fallen from their fronts as if a leprosy had eaten into them; for a foot above the water the walls are black with slime, the broken windows are stuffed with rags or paper, the shattered steps lead up to doors that swing by one hinge; the steps themselves are slippery with a greasy acum; to the edge of the lower stair there is a fringe of foul, green weed—it swings slowly in the crawling water; the iron grilles, once so beautiful, are eaten by bitter salt rust; the shutters hang at all angles, flapping and creaking in the wind; in the crazy balconies there is a number of broken flower-pots, with dead flowers in them; and through all these reeking alleys the greenish-gray water slowly pulses and oozes, covered with straw, eggshells, cabbage-stalks and nameless refuse. Over all this brood a hundred filthy and obscene smells, each canal contributing a particularly putrid stench of its own.

No longer does Venice sit in state; hour by hour and stone by stone she is sinking into fter dishonored grave. Then there is the other side of the shield—Modern Venice seized with the accursed craze for restoration, daubing her lovely old pictures with new paint,



Colored Terra-cotta Roundels from the Building of E. D. Chamberlin, Esq., St. Paul, Minn. Cass Gilbert, Architect; Johannes Gelert, Sculptor.



Colored Terra-cotta Roundels from the Building of E. D. Chamberlin, Esq., St. Paul, Minn. Cass Gilbert, Architect; Johannes Gelert, Sculptor.

London Bridge; up and down it tore and puffed cheap steamers, churning up the foul water into a deep brown froth. Very soon we turned into a side canal, and then, indeed, my heart sank. Was this really Venice, or was it a dreadful nightmare? Could this foul,

tearing down her old mosaics and sticking up ridiculous modern rubbish. Why, I myself saw the Bellini in St. Giovanni Crysostomo in actual process of so-called "restoration." All the world knows what has been done at St. Mark's and Torcello, and actually a few years

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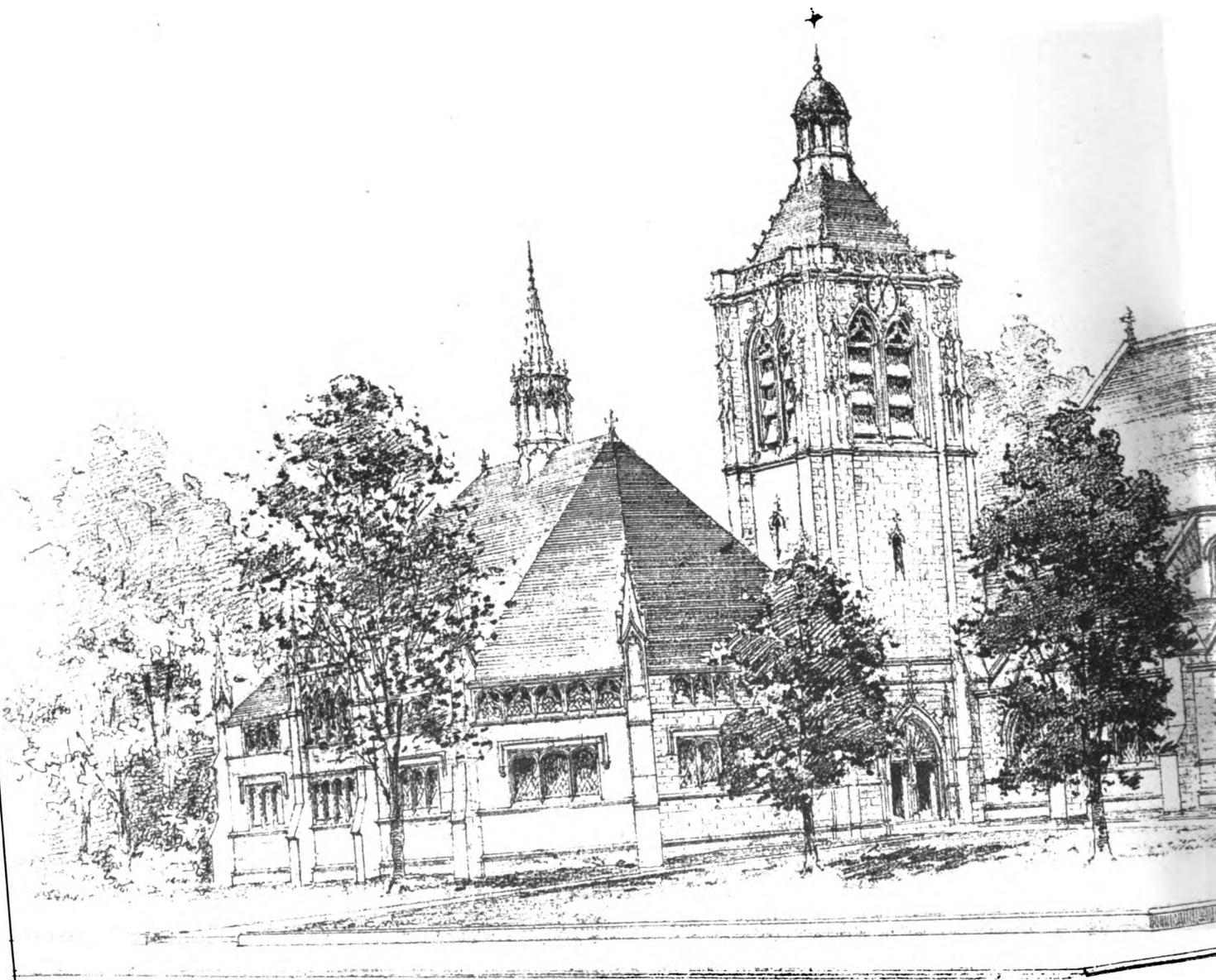


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Drawings for First M. E. C  
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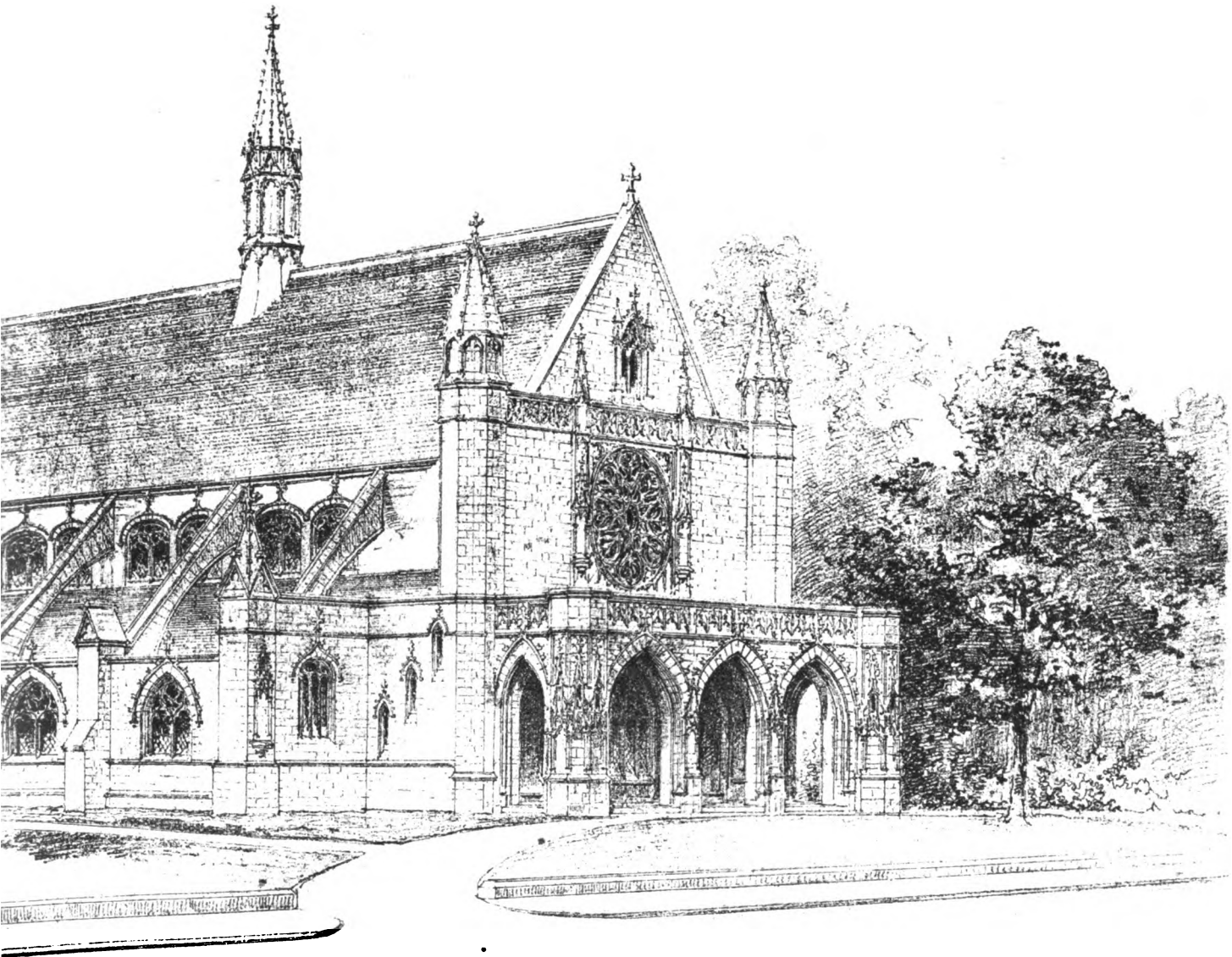
Church Germantown.

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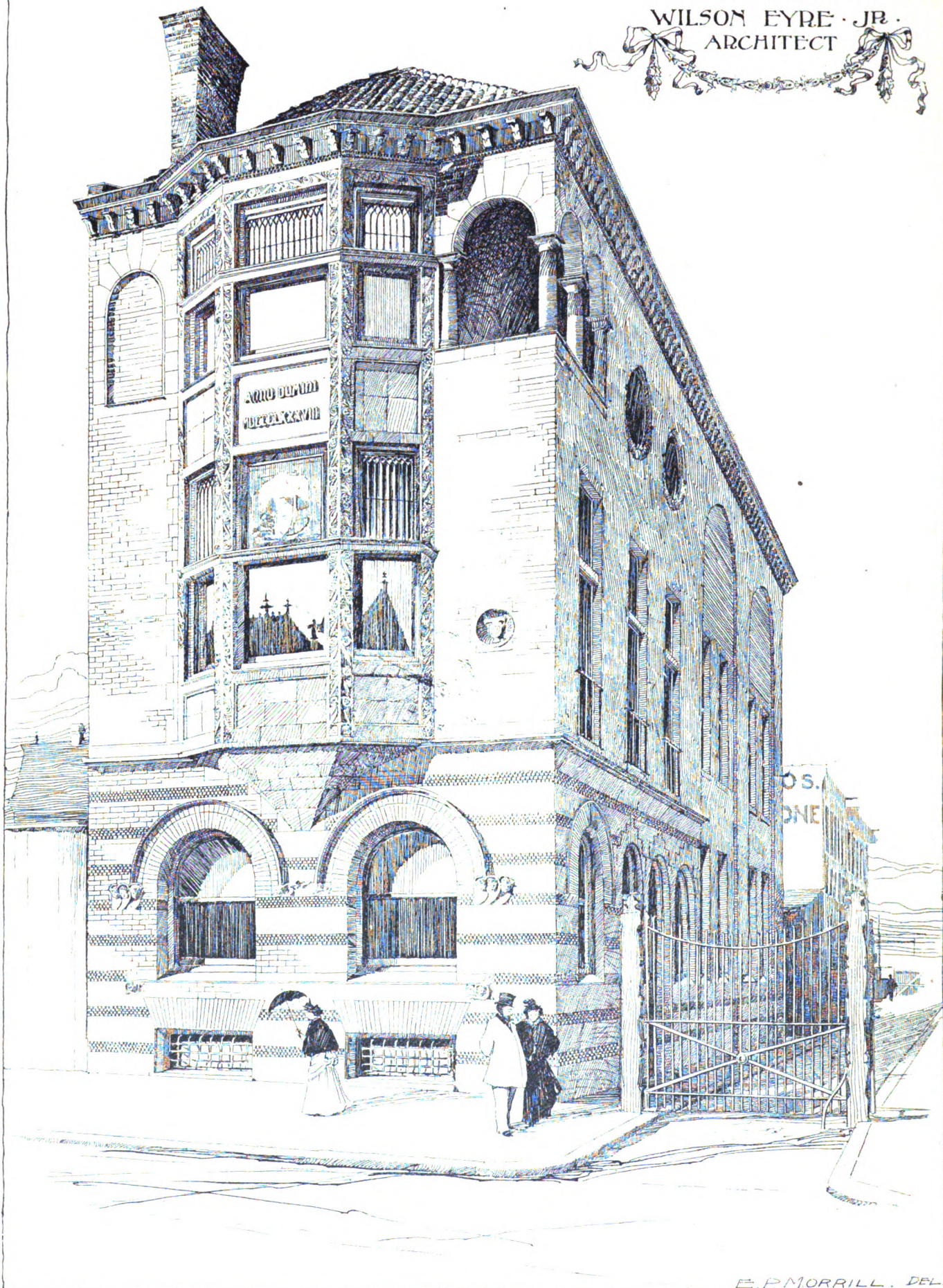
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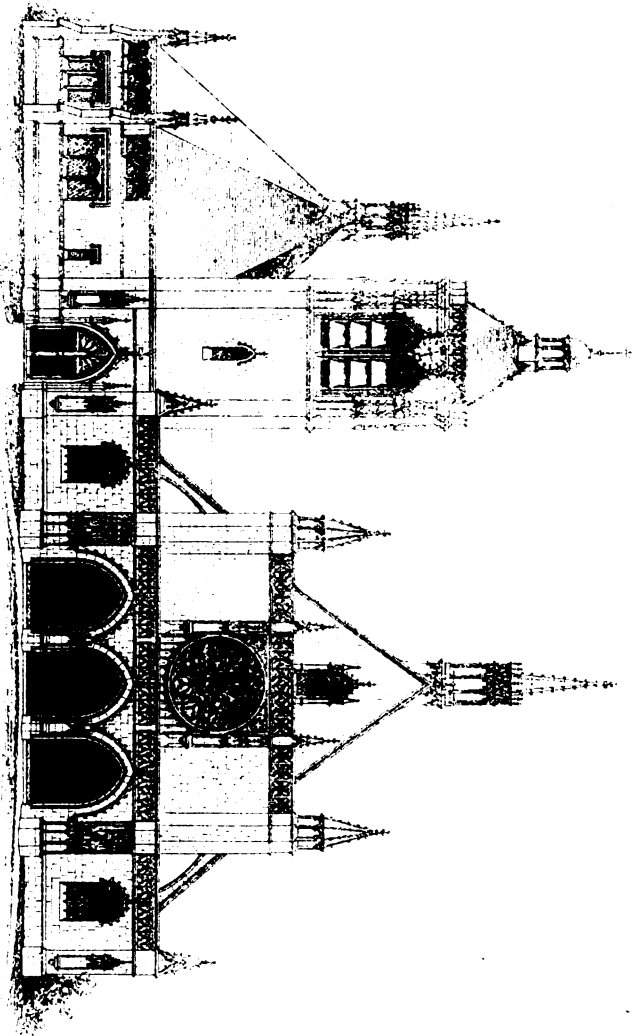
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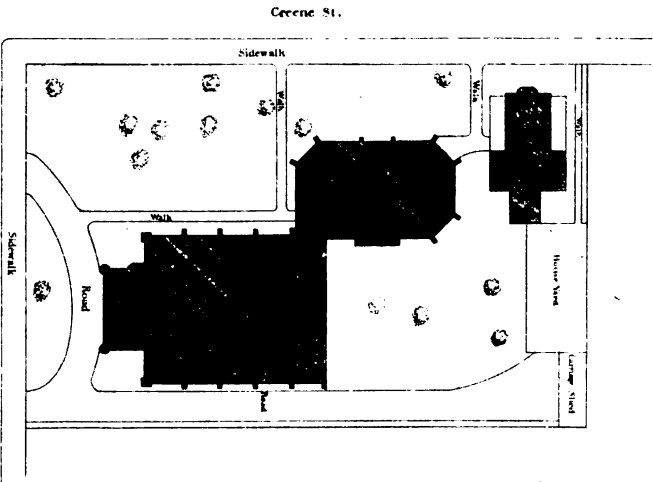
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Drawings for First M. E. Church, Germantown.

Submitted by  
  
Geo. T. Pearson, Architect,  
Philadelphia.



Elevation Facing Walnut Lane.

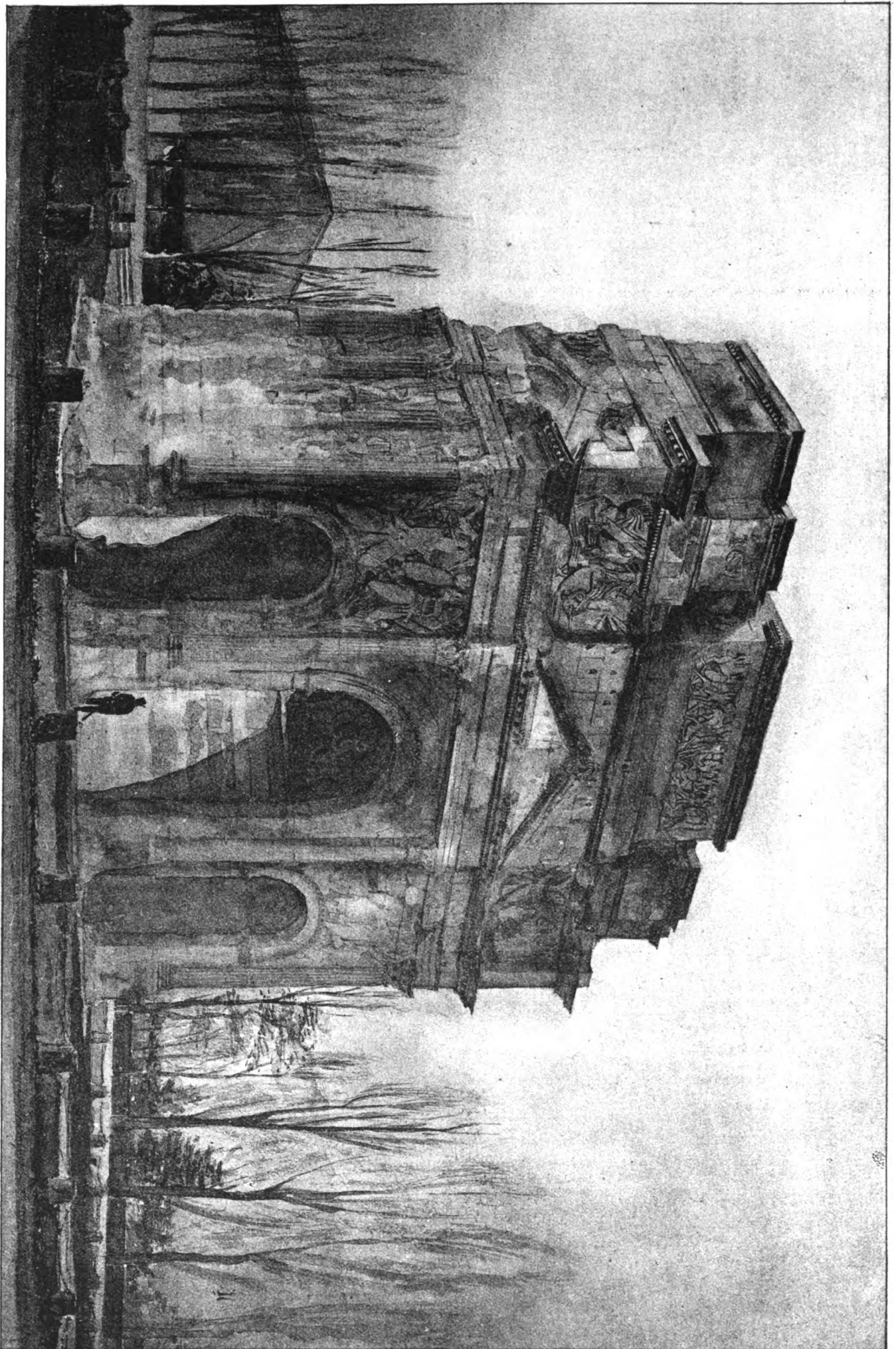


Plan of Grounds

REPRODUCED FROM THE ARCHITECT







ROMAN ARCH, ORANGE, FRANCE.

Sketched by THOMAS G. HOLYOKE.

WILLIAMS PUBLISHING CO. BOSTON



ago there was some talk of pulling down the Ducal Palace and rebuilding it!

Do you know the little church of St. Andrea, in Western Venice? For me, it had associations sacred and beloved, and I particularly wished to see it. I made my pilgrimage to it through the usual net of pestiferous canals, thinking much of the "little grass-grown campo opening to the lagoons and the Alps." Like everything else, it is a shame and a desolation; a huge railway bridge shuts off lagoon and Alps, the little campo is green no longer, it is trodden into black slime; the poor little church stands shamefaced, crowded round by factories and tall chimneys.

Then Torcello — what memories gather round it, and though restoration has been cruelly busy there, the ineffable pathos and peace of its life in death still move one's very heart. Coming back from a long day there, I read my Shelley, and, looking up from the ideal to the real, this is what I saw: In the far distance the usual defilement of ironworks and factories, in the middle distance a string of filthy coal-barges dragged by a puffing tug, nearer still, a frightful steam-dredger scrabbling up the mud and vomiting out a volcano of black smoke, and all around me were big steamers polluting air and water, and little steamers scuttling along, shrieking, squeaking and puffing. I read no more Shelley.

Night in Venice and music on the canal — that, surely, would have its own charm. I had pictured the soft air pulsing with sweet voices, and over all a sky "thick inlaid with patines of bright gold." Well, every night about eight o'clock the singing certainly began, guitars tinkled, and now and then one heard a fairly good tenor voice, but as a rule the men's voices were harsh and worn, and the women's indescribably shrill, and the songs they sang were Verdi and Bellini at their worst — "*Ah, che la Morte*," and its companion absurdities. And when once they began, they kept on; no sooner had one boatload of singers exhausted its *repertoire* than another took up its place, and repeated the same songs with the same quaverings and tinklings. — *Westminster Gazette*.

### SPANISH ART AT THE NEW GALLERY.<sup>1</sup>—III.

HAVING endeavored in the two preceding papers to give an idea, though inadequate, of the fine pictures in this exhibition, we trust that space may be found for a few words on the other objects of art, to the number of seven hundred, the majority of which are so choice in color, design or workmanship as to form an *ensemble*, both splendid and interesting, only second to the collections at Cluny and South Kensington. For some unaccountable reason, there is a total absence of Spanish leather, of which there is a fair quantity in England, however, and had all the collectors been equally liberal, the New Gallery would certainly be overcrowded.

We miss from amongst the jewelry Sir Charles Robinson's collection, which is at the Guildhall: Sir A. W. Franks and Mrs. Bontine lend some particularly fine emeralds set as pendants and necklaces, while there are two pairs of splendid amethyst ear-rings, 6" x 8" in length; but, indeed, the goldsmith's work in these is greatly wanting in the delicacy and finish we find in some of the pendants and reliquaries.

The superb display of silver and silver-gilt plate, lent by Sir Francis Cook, Colonel Sandeman and others, amply repays a long and careful inspection, on account of the vast amount of skill lavished upon it. The ecclesiastical plate consists of processional crosses, monstrances, *custodias* or tabernacles used for the exposition of the Host on Corpus Christi day and other great festivals. Mr. Stirling mentions a *custodia* made for Leon Cathedral, eleven feet in height, which was of Gothic design in five stories, adorned with numerous small figures of saints, and terminating in a tapering spire; and another similar to it, but larger, which occupied forty-five years in making. Both these "noble temples in silver" were melted down by the French into five-franc pieces! The vast quantities of silver and gold brought from the New World induced the Spanish sculptors to cease working in marble and bronze, and to exercise their talents in the precious metals, (their statues and busts were also

carved in wood). Amongst these sculptors, the most skilful was a German settler named Henrique de Arpre, whose fame was well sustained by his sons and grandsons, all of whom we may term rather "architects and sculptors in plate" than mere silversmiths. Sir F. Cook lends a fine *custodia* made by Juan de Arpre, about 1550, for the parish Church of St. Isidoro, Leon, as we learn from an inscription. (As a rule no details beyond hypothetical dates are given of any exhibits other than the pictures.) A certain Fray Juan de Segovia was also famous for his chalices, crucifixes, etc. His best piece of work was a salt-cellar in the form of a lion (*leon*) tearing open a pomegranate (*granada*), which was presented to Ferdinand and Isabella when they visited his monastery. The chalices lent by Sir F. Cook are exceedingly beautiful, and by the date assigned to them, 1500-1510, some of them were made by this brother. Lady Layard lends a monstrance of silver-gilt almost entirely covered with carved coral, which has a peculiarly rich effect. A small silver-gilt salver, not above twelve inches in diameter, of Portuguese Gothic work is embossed in high-relief to represent a battle, in which more than a hundred men in armor, both infantry and cavalry, are engaged in combat. On one side of the rim is a castle, and on the other are large ships sailing on what seems a stormy sea. The centre is crowded with soldiers and the entire embossing stands out sharp and clear. Where all is rich and rare one need not, however, particularize. A large marriage rose-water dish in *repoussé* has two hands holding a crown, while below are two winged bears; many of these dishes have large tulips and pomegranates in high-relief. Besides the shining contents of the cases, there are two very fine objects, tarnished, and apt to be unnoticed: the one by its elegant shape and workmanship appearing to be intended for a sort of epergne, but proving to be a silver brazier; while near it is a silver canopy about four feet in each direction, supported by four embossed columns, enriched with gold and having a cornice and frieze in *repoussé* work, the whole surmounted by a large round crown with a cross and bell. The base contains a throne for the figure of a patron saint, and we learn from an inscription that it was presented to the Carmona Convent in 1637 and cost a thousand ducats. At the New Gallery it forms a receptacle for a large Gothic group of the Entombment carved in one piece of wood.

We may appropriately turn from the metalwork to the tapestries and embroideries, since both were largely used for ecclesiastical purposes. That these are of elegant and graceful design is only

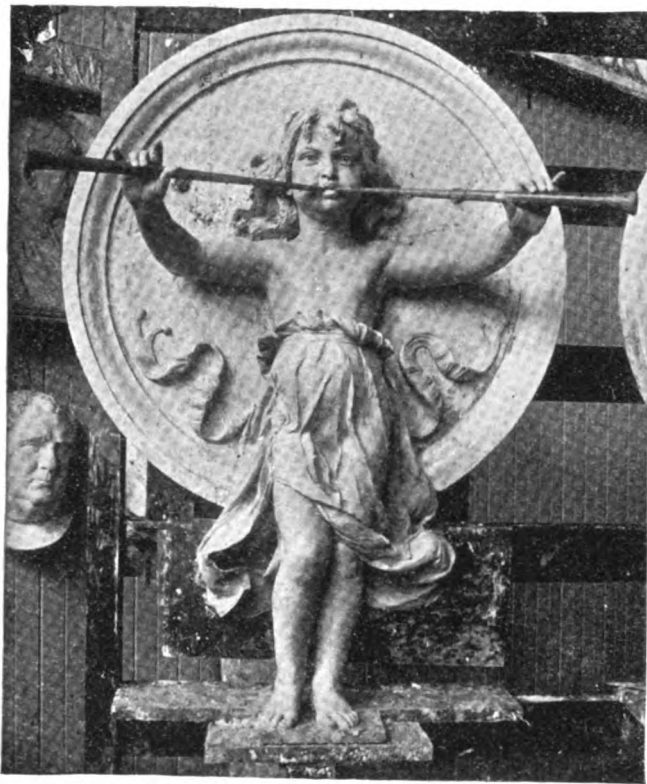
what may be expected from the fellow-countrymen of the skilful Moor, "whose decorations, vivid painting and lace-like stucco work had begun to be imitated before the fall of Granada," for Cean Bermudez quotes a formally drawn-up contract, in which a certain painter bound himself to paint with Moorish work the corridors of the Duke of Alba's castle.

Silk-weaving was introduced into Spain by the Moors before the twelfth century; during the Middle Ages the silk fabrics of Seville rivalled those of China, and at the fall of Granada no less than five thousand spinning-wheels were in operation. After this time, the victorious Christians, profiting by the secrets of the vanquished, were soon able to produce at Toledo, Murcia and Valencia silken stuffs equal to those of old.

Gratitude for their success stimulating their devotion, Isabella and her ladies vied with each other in embroidering vestments, banners, etc. Phillip II, in whose reign embroiderers ranked with artists, established a school of embroidery where the designs of Tibaldi and other painters were copied in exquisite needlework, in order that nothing might be wanting to the splendor of the Escorial. This may have been the origin of

some of the vestments exhibited, since none but the most gorgeous materials have been used in them. So harmonious are the colors of the silks when they occur, so rich are they in gold and silver, and even gems, that they are almost worth a king's ransom, and in their pristine beauty must have been dazzling. Mrs. C. Morell lends a tenth-century set of such, made of white silk and silver tissue, richly embroidered in gold and corals, the laid silk being held in place with small silver clasps.

From Oscott College, Birmingham, comes a vestment of white satin, on which flowers are embroidered in silk of exceedingly pure and lovely color, while for the border, gold-thread has been entirely



Colored Terra-cotta Roundels from the Building of E. D. Chamberlin, Esq., St. Paul, Minn. Cass Gilbert, Architect; Johannes Geiert, Sculptor.

<sup>1</sup> Continued from No. 1065, page 118.

used. One set of robes, embroidered with scenes from the life of John the Baptist, has been mounted to form a screen; it was exhibited at Madrid in 1893, and is lent by Sir S. Montagu. Tapestries and carpets hanging from the balcony give an Oriental setting to the more brilliant contents of the cases.

The lace calls for no special mention; the fans, mostly small, are mainly noticeable for the sticks or mounts of ivory or mother-of-pearl, exquisitely carved — the fan itself suggesting renewal in a later and more tawdry age. Many are painted on chicken skin. Lady Layard lends one, of the time of Charles III, having on the front a view of the Plaza Mayor de Madrid and on the back a bull-fight, the mount being composed of pierced and stained ivory.

One of the attractions of the exhibition is found in the large and magnificent display of Hispano-Moresque pottery, the majority of which, exceeding choice in design, manifests the art which conceals art. The prevailing tints are blue and golden brown — a proof of their antiquity, while the "lustre," though unobtrusive, would "make sunshine in a shady place." The oldest of Moorish plates extant have the centre of the dish enriched with heraldic escutcheons of Leon and Aragon, and of these there are several examples in excellent preservation. Many have also the eagle, the symbol of St. John, with occasionally the first words of his gospel, showing them to have been manufactured at Valencia, of which he was the patron saint. Valencia has been long famed for its pottery, Pliny, who was governor of the province, mentioning the numbers employed in making the "red-jasper ware of Saguntum." On some more modern plates the lustre is more coppery, while the inscriptions either imitate Arabic or have "*Ave Maria*." The symmetrical moulding of the three large jars exhibited would of itself arrest the visitor's attention. Of these, the smallest one, in perfect condition, placed in a glass case, is lent by the Hon. Mrs. Mostyn. It is of terra-cotta, has flanged handles and is lusted in two shades of delicate blue. This, with a larger specimen bearing marks of hard usage, resembles very closely the beautiful "Jarra" illustrated in Owen Jones's Alhambra, within which building it was discovered underground and, rumor says, filled with gold.

The largest of the three jars was made at the famous Malaga Works in the eleventh century, and decorated at Orihuela in an Arabesque design — in cream and gold (though we might more properly say *was*, for few traces of ornament remain on this jar) — from three to four feet high, and which, also, appears to have been underground for years. It is supported on a foot of gilded metal, made, signed and dated by Fortuny. "It has been conjectured," says a writer on the subject, "to account for the comparatively fewer remnants of pottery in Spain than in other countries, that the Spaniards broke them to obliterate as much as possible the memory of the hated Moor."

Marryat says that "The extent of the Mahomedan domination in the Old World and of the Aztec in the New would be clearly pointed out by their pottery, if no other record had been transmitted to us." The fine arts, and especially pottery, never recovered from the blow they received on the expulsion of the Moors, and each new church erected after that period was uglier than its predecessor.

The art of the printer and illuminator is well displayed in the manuscript and books lent by the Earl of Crawford, the Bishop of Portsmouth and Mr. Butler. From the very famous library of the former comes a fine manuscript on vellum on "Arms and Heraldry," containing two hundred and fifty-six coats-of-arms and flags richly emblazoned — the work of a Portuguese officer attending the Council of Constance, 1416. There is also the "*Commentary on the Apocalypse*," by St. Beatus, 1150, with one hundred and ten miniatures, some larger than 14" x 6", which is considered the finest manuscript produced in any country during the twelfth century; a Hispano-Moresque Koran, A. D. 1000, quarto, five lines to a page; and a Hebrew Passover Service, 1516. All these are more or less profusely embellished with vivid and dainty devices. The books in black-letter have their title-pages splendidly engraved, one of these being rather curious, a hand being held out with the palm towards you, and above each finger there is an open eye, "*Vigile et Labore*."

The armor is similar to that exhibited in the Tudor Exhibition, and fully described in your issue at that time, but there is one figure worthy of note, namely, a figure of a man and horse in complete war harness of the sixteenth century — the first object of interest that meets the eye as you enter the hall. The carved and inlaid cabinets, which are exceedingly fine, must be passed over.

It has been impossible to do more than summarize but a few of the numerous contents of the Exhibition. Enough, however, has perhaps been said to show their remarkable variety and interest.

**STATUE OF BEROLINA.** — The colossal statue of Berolina, the allegorical representative of the City of Berlin, in the Alexander Platz, of that city, is twenty-five feet high from the feet to the crown, and will stand on a pedestal of red granite of equal height. Dressed in a coat-of-mail and covered by a flowing gown, the strong, but still well-rounded shape of the figure is shown to best advantage. The left hand is held out as if extended to welcome, while the right is resting on a shield. On the breast she wears on a long chain a copy of the gold medal with the portrait of King Frederick William III, which was given by that monarch to the Mayor of Berlin, to be worn as an insignia of his office. The sculptor, Professor E. Hundrieser, has been signally honored by the German Emperor for the work. — *The Collector*.

## ELEVENTH ANNUAL EXHIBITION OF THE ARCHITECTURAL LEAGUE.<sup>1</sup>— II.



League succeeded last week in getting the six premiated designs for the City-hall competition, and in order to exhibit them had to sacrifice one of the smaller galleries devoted to the decorative arts. This having been done, necessarily on very short notice, leaves us under the necessity of passing over one of the most attractive of the small galleries, as we had hoped to return to it later and to give a fuller account of its merits.

It was more particularly devoted to women's work, though not to them alone, and the general effect was that of good and substantial progress. Textiles and embroideries, designs for stuffs, carpets, rugs and wall-papers; book-covers and posters were most prominent, with an interspersing of schemes of decorative and leaded glass, and we shall have occasion to notice several of the exhibitors on account of work shown in other rooms. E. J. N. Stent, W. B. Van Ingen, T. D. Wadellon and Herman Schladermundt had some interesting schemes for interior decoration. The Misses Roberts, Eliason, Hill and Van Salisbury had completed work in silks; Miss Richards had book-covers and posters; the Misses Gillian, Turkish and Moorish draperies; there were a number of good designs for rugs and wall-papers, all of which we regret not to have seen a second time and noted more carefully.

The prizes awarded for the City-hall seem to show that the expert committee were wedded to one conception and one only: the Hôtel de Ville in Paris. Each of the six designs had a distinct leaning in that direction. It is almost a waste of time to take issue on this point, yet certainly a very strong argument could be made against the Hôtel-de-Ville type in connection with the City-hall surroundings. The Hôtel de Ville has plenty of space in front, with real trees and grass-plots; it is on the river, and none of the surrounding buildings tower above it. The City-hall would have an acre or so of asphalt and a couple of wretched fountains; the Post-office in all its hideousness in front; the *World* and *Times* Buildings on one side, and the *Sun's* office-cat is publishing designs from time to time for the sky-scraper it is contemplating to dwarf the *World's*; it probably defers building only because it is trying to add a dozen or more additional stories, without getting its foundations down too near the infernal regions. On the other side of the City-hall are the Postal Telegraph, the Home Life Insurance and a few other sky-scrapers. Under such circumstances the Hôtel de Ville might possibly look like a frosted cake in the bottom of a basket. To compete in height with its neighbors present and to come is, however, out of the question, but scale and dignity of composition, a magnificent cornice, perhaps a tower, which like the civic towers of the Italian Middle Ages, would impress one with the power of a great municipality and be a landmark combined, might give a sufficiently worthy result to dwarf the surrounding commercial conglomerates, even in the eyes of the most casual observer.

It may be that not one of one hundred odd unsuccessful competitors had a well-developed scheme differing from the Hôtel-de-Ville type, or we may be wrong in our reasoning as to the effects or defects of actual surroundings. The judges in their report admitted that they could not consider any of the designs as solving the problem satisfactorily; perhaps it was insoluble on the lines laid down. The problem was, as a matter of fact, reduced to two elements: first, a plan which was so shaped and circumscribed as to greatly hamper any monumental development, and became, therefore, largely a study of conveniences and utilities to which all else was subordinate; second, the adaptation to that plan of an exterior, which, taking into account the surroundings, would architecturally, intellectually and sentimentally express its purpose — the governing force of a great metropolis. With this in mind, it seems a matter for hearty congratulation that the Legislature killed the proposition. The next time a city-hall for New York is called for, the conditions may be more favorable: they cannot be much worse.

To return to the premiated designs, it is difficult to discover why Mr. Thomas's was selected for the first prize. His plan is a good practical fulfilment of the conditions elaborating a greater familiarity with the details of administration than is shown by his competitors, but having on the other hand æsthetic defects, which became fatal in elevation, especially the jogging back of the south-east corner. His perspective shows this very clearly, and that his style is modelled on that which is so well known to us as "Government" architecture — the bastard French-Italian Renaissance to which we owe, amongst the other things, the Post-offices of New York and Boston, the brownstone "palatial mansion" of fiction, and the General Government and Illinois State Government Buildings at the Chicago Fair.

The best design, certainly the most ably studied, developed and rendered is Mr. Flagg's. He gets over the crooked corners by means of well detached octagonal towers on the three difficult corners, which work out well in plan, but are less fortunate in perspective where they recall the ornate side entrance of the Paris Opera-house. He frankly adopts the Hôtel-de-Ville type in scale and detail, but he has mansards of so many heights and pitches, and his Hôtel-de-Ville central turret is relatively so small, that the general effect seems to lack breadth and dignity.

<sup>1</sup> Continued from No. 1054, Page 110.



Mr. E. P. Casey's design is the next best. He has made his building rectangular by keeping well back from the limiting lines, thereby losing considerable space on each floor. It is always a question whether a public building as large and as near the sidewalk as this will not suffer by *not* following the line of Broadway and of Park Row. With room for gardens and approaches that bad effect is overcome, but the City-hall leaves hardly more than the regular sidewalk. Mr. Casey's perspective shows skill in composition and rendering, but his central motive hardly dominates enough to count as he evidently meant it to; perhaps, as it seems to enclose unoccupied space, he had compunctions based on the price per cubic foot he was entitled to spend for the city. He places his Council Chamber projecting from the centre of the east wing, which gives a good, strongly-marked feature for that front, but leaves unoccupied a considerable space within the limiting line, and his thoroughfare for pedestrians, being under the centre of the Council Chamber, is a long gallery likely to be dark and therefore to become dirty and littered up.

The other competitors, Rankin & Kellogg of Philadelphia, Gordon, Bragdon & Orchard of Rochester, and P. D. Weber of Chicago, have no very salient features to comment upon. They get as near to the Hôtel de Ville as they conveniently can and add one or two little flourishes of their own to emphasize their originality. The six prize-winners certainly arouse one's curiosity to know what the unknown multitude did, and it would be most interesting if the League or some similar body could get them together for exhibition, or if some means could be found for publishing a very considerable number of them.

In the League rooms proper is an exhibition, very interesting to the architect, if not so fascinating to the public at large. It comprises designs for various League competitions, W. C. Ayres winning the gold, and E. R. Bossange the silver medal this year, also students' competitions, Columbia College students' work, the work of students of the School of Applied Design for Women and the Thesis for the diploma of the E. D. B. A., Paris. There are also competitive designs for the Avery Prize, won this year by J. F. Harder. There is shown in all a great deal of good, sound work, an uncommonly high degree of skill in rendering, and it is altogether very encouraging for the future. Mr. Friedlander's drawings for the Thesis deserve special mention for their thoroughness, clearness and very brilliant rendering.

The women's work in architecture as here exhibited shows, on the other hand, a tendency to minuteness and to the working-out of finished drawings at too small a scale, which is not to be encouraged.

The general decorative work this year is well up to the average. We see, as we always expect to, sketches and cartoons innumerable, and of a high degree of excellence, from the Tiffany Glass Co., Maitland Armstrong, Fr. Crowninshield and other well-known specialists. Walter Shirlaw has some interesting color cartoons for glass, and one, looking like a Japanese stencil, one finds on closer examination to be the thin shred of paper cut out by the double knife of the glass-worker in cutting patterns. In this case it is a perfect cobweb, about two by three feet, cut with the most delicate appreciation of line, and not a slip of the knife apparent. This cobweb is of detail paper and has been mounted on dull black ground and covered with glass to hold it in place.

The most interesting and encouraging features in the exhibition are the various competitive and other sketches by painters and sculptors for work of a more or less public character.

First in importance is the work on the Congressional Library, for which Kenyon Cox exhibits in a most interesting way: his first color-sketch at a scale of one inch to the foot; the studies from the nude for the several figures in monotone; and finally, a careful color-sketch at three-inch scale, squared off for his final painting. His subject is "The Arts," and the panel, a lunette. Vedder has five most interesting panels completed for the hall of the Library. The compositions have a general similarity: a seated central figure with supporting figures of children on either side; the panels are semicircular and the figures fill them very fully, yet do not look crowded. The subjects are "Anarchy," "Corrupt Legislation," "Peace," "Government" and "Good Administration," and it is refreshing to see how much character and how much variety Mr. Vedder has succeeded in putting into his work within the extremely narrow limitations of space and the general uniformity of composition. It is decorative art as the old masters saw it. Herbert Adams has a plaster model of a tympanum for the Library. Nothing he touches can be poor or uninteresting, but one feels in this case that he is not entirely at home in the purely architectural ornamentation. Philip Martiny has a corner cove showing his usual skill.

The competition for the Sherman Monument with eight of the models is here on exhibition, but they have already been fully reviewed in our issue of February 1. The Hahneman Monument at Washington is interestingly exhibited with working-drawings of the exedra, pedestal, etc., by Marsh, Israels & Harder, and a half-size model in plaster, by Mr. Niehaus, the sculptor.

Mr. Hardenbergh instituted a competition for the decoration of the walls of the dining-room of the Manhattan Hotel. C. Y. Turner, the successful competitor, Herbert Denman, Edward Simmons, Will H. Low and Frank Fowler each exhibit their designs, in each case a small sketch, a color-scheme and a more careful study about one-fourth full size. It is not only difficult, but dangerous to do as Mr.

Turner has done in his successful sketch, i. e., to show a marble floor with rugs, etc., and people walking around ten feet or more above one's head, and a horizon line near the top of his canvas.

Others of the competitors did much the same thing in different ways, but Mr. Simmons disguised it more cleverly by strong groups in the foreground; had he met his judges with his scheme a little more carefully worked out, he would have been a more dangerous antagonist. Very few judges have the ability to see what will be the final outcome of a certain kind of vague, rough sketch, even when they are perfectly familiar with the particular painter's finished works.

E. Hamilton Bell has two color-schemes for the Jefferson Hotel in Richmond, for Carrère & Hastings. W. E. Van Ingen has an allegory for a ceiling cartoon, sketched in black-and-white, in very good style, but the perspective seems a bit forced, the figure in the foreground too large or those in the background relatively too small.

Heinigke & Bowen have some designs for mediæval windows that are cleverly drawn and colored, but so very mediæval that the twentieth century will perhaps find them difficult to live up to.

Mr. E. H. Blashfield has had the hard luck of making some very charming decorations on a very ugly piano. One of the most prominent objects in the first gallery is a very large composition covering a large part of the end wall, and is called "Adoration of St. Jeanne D'Arc." It is by J. W. Fosdick, and is done in burned wood, with a little gilding here and there. The whole scheme is strong and decorative, the color is good, and with such skill as Mr. Fosdick's to rely on, it is easy to see great future possibilities for this method of treating wood. In another room is a very successful table done in the same method. In the same method, in technique at least, is some work by Sylvia Sewell, a poker table. Miss A. A. Sewell has a series of pastels of cupids for a frieze, which are very charming in color, rather vague in drawing, and give one an unsatisfied feeling, like that produced by Mrs. Wheeler's shadow silks. You never know whether you know too much to like them or too little, and still you like them. Shakespeare expresses the feeling, when he makes Polonius discover that the cloud is "very like a whale."

Philip Martiny has a clever sketch in plaster for the attic of the Art Gallery at Chicago which it is a pity could not have been added to the memorial alcove where Atwood is so meagrely represented. He has also a good conventional figure of an angel holding a font, for a church of T. Henry Randall's. There is a good deal this year and it is more than usually good. The cleverest modeller and ablest to catch the best quality in the Louis XIV and Louis XV styles is Karl Bitter, who has caryatides and spandrels full of swing and style and splendidly modelled. Compare with Bitter's work two Regency panels over doors, that are more than ordinarily good in workmanship, yet lack style absolutely.

There are a number of casts for wood-carving and other interior work for Mr. George B. Post which show a good deal of cleverness. A good part of the sculpture or casts exhibited, on the other hand, are not essentially decorative and it seems to us best to draw the line on them so as not to exceed the limits of this notice.

J. Massay Rhind's "Madonna and Child," however, is conventional enough to come just within the limit and is a very charming work with a pleasant slight savor of the earlier Italian sculptors.

Two pilaster figures, by Isidore Konti, are worthy of mention as free in handling and decorative in composition.

The iron and metal work is rather sparingly exhibited this year, a wrought-iron gate by L. Hershman being the only really good piece, and that is not fully up to the standard set of late years. Out in the hall there is a remarkable brilliant rendering of a Château Gate in good late style by Ballantyne & Tracy.

Mosaic is represented interestingly by a three-fourths-inch scale model for the Delivery-room of the Chicago Public Library for Shepley, Rutan & Coolidge. The mosaic treatment is shown in color on the model and a panel of the finished mosaic is hung near by. The design is largely in slender scroll-work with leaves and flowers on a creamy ground. It is the Tiffany glass mosaic, which may have advantages in the Chicago atmosphere, but which cannot compare in texture or tone with marble mosaic, nor in richness with the Italian enamel. It has, of course, merits of its own in the beautiful gradations of color and in the opposition of pieces of very different sizes and shapes, and Mr. Holzer, who has the work in hand for the Tiffany Glass Co., will no doubt bring out all its possibilities.

We must not close without a mention of Messrs. Olmsted & Eliot's drawings for landscape-gardening. They have a very interesting exhibit ranging from very modest plots to public parks and domains like "Biltmore," and we would be glad to see the landscape-gardeners, or architects, as we are getting to call them, more generally represented; they are certainly one of the most important of the allies of the architect.

The catalogue itself calls for brief mention; the cover, as in previous years, is the result of competition amongst the members, Mr. W. W. Kent being the successful one this year, with a very well-drawn design, the black-and-white and red distributed with great art. What is modestly called "The Architectural League Reference Book" anglice, the advertising, bearing testimony to the diligence and persuasive powers of the committee in charge, contains one hundred and fifty-five pages and advertises besides with very good photographs or lithographs thirty-two recent buildings. Of course the architect does not advertise, that is not professional etiquette, but of course, also, the contractor who puts in this, that or the other,

and wishes the public to know what handsome or prominent buildings he is privileged to work on, has the kindest of feelings for the architect who gave him the opportunity to advertise, and sees to it in the kindness of his heart that the architect's name is also connected with the building.

Trade circulars run more and more to that kind of advertising, which practically makes the architect *particeps criminis*, and whether it ought to be stopped or can be stopped is a question on which the profession is much divided. Why should not the League take the matter up for discussion, using its own catalogue as an exhibit in the case, and decide whether professional etiquette is to be modified, or advertising?

#### THE TWO PRESIDENTS.



A Greek Altar, Theatre of Dionysos, Athens.

THE news of the passing away of Lord Leighton burst upon London like a thunderclap. Accompanied by a friend, I had passed a certain Saturday afternoon with Trilby and Little Billee, the Laird, and Taffy of the dumb-bells. We had been thrilled by the wonderful impersonation of Mr. Tree's Svengali, and horrified by the death scene; we were saddened by poor Trilby's pathetic love-story, and her still sadder end; and then, as we passed from the theatre door with the mournful, foggy atmosphere of a dripping London evening, we were met by the shrill cries issuing from a dozen juvenile throats—"Death of Lord Leighton!" And, strange as it may appear to outlanders, it is none the less true, that we both exclaimed, "Lord Leyton? Who is Lord Leyton?" That it was Frederic Leighton, the great artist, did not occur to either of us for some minutes. And now, we have to consider our new president, who was elected last evening—"Le roi est mort; vive le roi!"

Possibly no two men called to fill the same post, could have been more diverse in every respect than Sir Frederic Leighton and Sir John Millais. Both are consummate artists in their several manners—both may be called essentially conscientious workmen in all that they have undertaken; but their systems are as opposed as the two poles.

In Frederic Leighton there was much of the refined and elegant scholar of the Italian Renaissance, added to the artist. Like the great Italians, Leonardo and Michael Angelo, he was an all-round man. Painter, draughtsman, sculptor, musician and scholar, he might possibly have been a poet, an architect and a goldsmith, had he minded to emulate the Italians of the fifteenth century, for he was eminently a decorative artist and a graceful designer. His one desire was beauty of composition, hence the awkwardness, occasionally, of his coloring, and the unpainter-like, waxy surface of his flesh. That there is a want of masterliness in the handling of the brush, a softening down of all trace of the tool, is evident to the most superficial observer; but to the artist or amateur who loves beauty of line either in nature or in drapery, Leighton's pictures form a never-ending pleasure. Look at the composition of "Wedded"; observe the lines of the drapery in the "Bracelet," and many other of the single-figure pictures; study the Panathenaic procession, and it will be seen at once what a master of style the artist was. And the refinement of his work! One cannot recall a single instance of vulgarity, coarseness, *double entendre*, or other objectionable quality. Leighton has been compared to Monsieur Bouguereau; but beyond the same smooth quality in the painting, where is the similarity? The Englishman was so refined, so straightforward, so to speak, in his meaning; the Frenchman is graceful and elegant, no doubt, but he is frequently somewhat *leste*. Perhaps the French prototype of Leighton was, rather, that distinguished artist and clever professor,

the late Alexandre Cabanel. He, too, was a waxy painter; but he had none of the meretricious sentimentality of Mr. Bouguereau.

One of the late president's last acts was the desire to see justice done to our greatest sculptor, the late Alfred Stevens. Some time ago Lord Leighton initiated a subscription in order to place the tomb of Wellington in its proper place in the nave of St. Paul's Cathedral—and it was done. Crowds of Londoners and foreigners wander round the great church, gazing at many sculptural horrors; but how many of them recognize the work of genius of one of their own countrymen? To Sir Frederic and the educated few, Stevens's work is equal to the grand monument of Lamoricière, by M. Paul Dubois, or indeed, to any of the Scaliger tombs at Verona, or their fellows in Sante Croce, at Florence. In Stevens's day, the British public, headed by the Dean of St. Paul's, objected to a warrior riding into the cathedral upon his charger. They were so passing ignorant that they had never seen, or seeing, had not noticed, the many Renaissance tombs of the same character in Italian churches; and so the great man was poked away into a side chapel, which, like the one in old San Michele at Florence, was too small for the great work of art which was destined to ornament it. Sir Frederic realized the beauty of the monument, and succeeded in getting it removed; but he has not lived to see the equestrian statue, which it is to be hoped may one of these days crown the erection. Would this not be a fitting memorial to these two great artists—Stevens and Leighton? Letters have appeared in the papers, haggling over the monies paid to Stevens for his great work; but surely £28,000 is not an enormous sum to spend upon one of the finest tombs of modern times? For a big gun, or a little war, or a public funeral, it would not be grudged; but for an artistic monument—go to! I'll none of it.

The new president of the academy is a very different man. Sir John Millais is as truly the Englishman (or, possibly, the Scotchman) of the nineteenth-century, bluff, manly and sturdy, as Leighton was the refined courtier of the Italian Renaissance. One can conceive Sir Frederic entertaining the Medici and the Strozzi princes, or figuring about after the manner of the elegant gentleman in the pictures of Watteau—he was so eminently the fine gentleman of all times—self-possessed, courteous to high and low, kindly and considerate.

Sir John Millais is an artist of a totally different calibre—he is essentially a Britisher, whereas his predecessor was a cosmopolitan. No foreigner would have detected the Englishman in Leighton; no one but a lunatic would imagine Sir John to be anything but an inhabitant of the British Isles. But he is also a great artist. Brought up in the austerity of the Pre-Raphaelite Brotherhood, he has, of late years, emancipated himself from its fetters, but remained true to its principles. The grand "Yeoman of the Guard" was but the complement of the exquisite "Huguenot"; and the "Isabella" remains the most wonderful piece of work executed by a youth of nineteen that the present century has yet seen.

Sir John is, above all things, a catholic in art; he can admire the minute finish of a Metzsu, the exquisite grays of Ter Borch, the splendid handling of a Velasquez, the strength of Rubens and Rembrandt, the elegance and grace of Watteau, and the atmospheric truth of the modern Impressionist. Do we owe to him, the latest acquisition as a Foreign Honorary Member of the Academy, that great artist, painter as well as sculptor, M. Paul Dubois? As Sir John is a great believer in the perfection of French art, he may possibly have saved us from M. Bouguereau, whose popularity with the public no one disputes. Will the new President some day strike out into a new line, and favor the election of that greatest of animal painters of all time—Rosa Bonheur—and so open the doors of the Academy to womankind? Mrs. Moser and Angelica Kaufmann were Academicians; and it seems somewhat hard, if not unjust, to place Rosa Bonheur and Madeleine Lemaire on a lower rung of the artistic ladder than those ancient ladies. Of native-born women artists, I preserve a judicious silence; although I may cast a side-glance upon more than one who seems to merit the position so easily obtained by some of their brothers of the brush. "Art is long—but life is short."

Sir John is possibly, as a painter, a more popular man than the late president, both with artists and the public; the former cannot fail to bow down before his splendid *technique*; the latter adore his "Cinderellas," his "First Sermons" and the like. His children are "dears." So were Sir Joshua's; but somehow the older man threw a dignity into his little people and their ways which Sir John's do not possess. Nor can we exonerate him from pandering, now and then, to the public taste, and lowering art to the level of those who delight in "Christmas" and "Summer Numbers." Sir Frederic never did this; if his work had ever appeared in cheap colored reproductive form (and I cannot recall the fact), he would have raised the public taste to his own artistic eminence. He never degraded, nor even lowered, art; she was his lady-love, to whom he gave all that was best in his nature—his intellect, his time, his enthusiasm. He served her loyally and truly; and hence, he was one of the few artists of the day, whose work was always dignified and noble. If the public did not appreciate its good points, or condemned it for the absence of qualities it never was intended to possess, what mattered it to him? He pursued his path steadily, neither looking to the right nor to the left—a noble example of devotion to the highest principles of art—and had he been a painter of cottages and common folk, the principles would have been the same, for subject has nothing whatever to do with the matter. S. BEALE.



## SKETCH-CLUB OF NEW YORK.

THE regular monthly meeting and dinner of the Sketch-Club of New York was held on Saturday evening, March 7th, forty members being present.

Mr. Walter T. Owen and Mr. G. F. Moore were the guests of the Club.

After the dinner Mr. J. Oliver Cummings, the President, favored the Club with an interesting criticism of the drawings submitted for a "Book Cover," the March competition.

A communication from Mr. John H. Duncan, a member of the Club's Advisory Board, was read, suggesting "A Building for a Bank and Safe Deposit," as a subject for the April competition. It was decided to give this subject two months' time, drawings to be handed in at the May meeting, and a "Small Tablet," suggested by Mr. Owen, was adopted as the subject for the April competition.

Eleven designs were submitted for the *American Architect's* competition for a \$500 memorial.

Three designs were selected according to the programme.

The meeting was adjourned at 10 P. M. to enable members to attend the "League Smoker" held that evening.

HARRY P. KNOWLES, *Recording Secretary.*



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

SKETCHES BY MR. WALTER H. KILHAM, BOSTON, MASS., LATE HOLDER OF THE ROTCH TRAVELLING-SCHOLARSHIP: TWO PLATES.

[Issued with the International and Imperial Editions only.]

BUILDING OWNED BY E. D. CHAMBERLIN, ESQ., ST. PAUL, MINN. MR. CASS GILBERT, ARCHITECT, ST. PAUL, MINN.

THIS building is interesting not only for the success with which the demand for excessive shop windows has been met, but also because it was ready for occupancy 129 days after the workmen began to tear down the buildings then occupying the site. It is also interesting for the occurrence of a series of enamelled terra-cotta roundels—the first work of the kind, it is believed, that has been executed in this country. The coloring of these roundels is secured not by slip glazes, but by true opaque enamels, some of the lighter portions being treated with a transparent glaze. This work and all the terra-cotta was executed by the American Terra-Cotta & Ceramic Co., Chicago, and especial credit is due to Mr. Gates, President of that Company, for his intelligent and enthusiastic efforts to do better work than had yet been done. The great technical difficulties encountered in the preparation and burning of these little figures, which are in high relief, some parts being entirely detached from the surface, required him to give it the closest attention both in the preparation of the clay, and in the burning. The figures were modelled, after the architect's design, by Johannes Gelert, sculptor, of Chicago.

DESIGN FOR THE FIRST M. E. CHURCH, GERMANTOWN, PA. MR. G. T. PEARSON, ARCHITECT, PHILADELPHIA, PA.

ELEVATION AND PLAN OF THE SAME.

ST. ANTHONY CLUB-HOUSE, PHILADELPHIA, PA. MR. WILSON EYRE, JR., ARCHITECT, PHILADELPHIA, PA.

THE TRIUMPHAL ARCH, ORANGE, FRANCE, AFTER A SKETCH BY MR. THOMAS G. HOLYOKE, ST. PAUL, MINN.

[The following named illustrations may be found by reference to our advertising pages.]

FRIEZE BY PIERINO DEL VAGA, NO. 8, VIA TOR MILLINA, ROME, ITALY.—FRIEZES IN A HOUSE, NO. 82, VIA GIULIA, NEAR S. GIOVANNI DE' FIORENTINI, ROME, ITALY.

FRIEZES, NOS. 14 AND 15 VICOLO DELLA FOSSA, ROME, ITALY.—FRIEZE IN THE COURT-YARD OF NO. 8 VICOLO DELLA VACCHE, ROME, ITALY.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. VIII.: THE ESCALIER LESAGE, NICE, FRANCE.

WROUGHT-IRON GATES, HIRSCHBERG, SILESIA, GER.

[Additional Illustrations in the International Edition.]

MUSEUM, NANTES, LOIRE-INFÉRIEURE, FRANCE. M. CL. JOSSO, ARCHITECT.

[Copper-plate Photogravure.]

THE NEW LAW COURTS, COBLENZ, PRUSSIA. HERR ENDELL, ARCHITECT.

This plate is copied from the *Zeitschrift für Bauwesen*.

ETABLISSEMENT DUFAYEL, PARIS, FRANCE. M. RIVES, ARCHITECT; MM. DALOU AND FALGUIERE, SCULPTORS.

This plate is copied from *La Construction Moderne*.

NEW SHIRE HALL, DURHAM, ENG.

This County Council building is now in course of erection in Old Elvet, Durham, from the plans of Messrs. Barnes & Coates, of Sunderland, whose design, it will be remembered, was chosen last summer in public competition by the council, who gave preference to this, the adopted plan, it was said, on account of its agreement with the limitations of cost, which had been exceeded by others. The geometrical drawings of the selected design were published in the *Building News* for August 16 last; but we have at no time expressed any opinion on the merits of the disputed points raised over the award, as the evidence was so conflicting. The conditions of the competition, at any rate, left no doubt as to the rights of the promoters, who reserved powers to themselves which architects should have declined to recognize, and by refusing to compete have rendered impossible in practice. After accepting the terms by becoming competitors, protest was futile. As to the relative architectural merits of the premiated designs, there could have been but little difference of opinion. Messrs. Barnes & Coates's plan for clever arrangement is, however, undoubtedly a good one.

The plate is copied from *Building News*.

DETAIL OF ORGAN, DUNBLANE CATHEDRAL, AS RESTORED BY MR. R. R. ANDERSON.

PULPIT, CHOIR-SCREEN, ETC., DUNBLANE CATHEDRAL, AS RESTORED BY MR. R. R. ANDERSON.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

## A "SIGNED" BUILDING.

WASHINGTON, D. C., March 16, 1896.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Apropos of the editorial on the subject in the last number of your valued publication, many of its readers may be interested in knowing the fact that the Trustees of the Corcoran Gallery of Art have allowed the architect, Mr. Ernest Flagg, to place his name with the date of erection in a suitable place on the façade of its handsome New Gallery Building now in course of construction in this city.

They very wisely thought that the public would be as much interested in knowing who designed a notable building as who painted a fine picture, and that the one was as much entitled to credit for a successful achievement as the other. MERCATOR.]



BALTIMORE, MD.—The Walters Art Gallery will be open to the public on all Wednesdays till May 1, on all Saturdays in April, and on Easter Monday.

BOSTON, MASS.—Paintings recently purchased; the Martin Brimmer Pictures; Japanese Paintings; Line Engravings, Mezzotints and Etchings by Rembrandt: at the Museum of Fine Arts.

Paintings by New England Artists: at the Jordan Art Gallery, 450 Washington St., until June 1.

Loan Collection of Portraits: at Copley Hall, Clarendon St., March 2 to 22.

*Paintings by Boston Artists:* at the St. Botolph Club, March 10 to 21.  
*Works by Swedish Artists:* at the Boston Art Club, until March 28.  
*Drawings by George Du Maurier:* at James M. Hart's, 220 Boylston St., until March 21.  
*Paint and Clay Club Exhibition:* at 7 Hamilton Place, March 17 to 27.  
*Pictures of Holland by Charles H. Woodbury and Marcia Oakes Woodbury:* at Chase's Gallery, 346 Boylston St., March 13 to 27.  
*Symbolistic Paintings by P. Marcus-Simons:* at Doll & Richards's Gallery, 2 Park St., until March 25.

**BUFFALO, N. Y.**—*Fifth Annual Exhibition of the Buffalo Society of Artists:* March 23 to April 11.

**CHICAGO, ILL.**—*Works by Gustave Doré:* January 21 to March 21, *Annual Exhibition of the Cosmopolitan Club:* March 11 to 31, at the Art Institute.

*Ninth Annual Exhibition of the Chicago Architectural Club:* at the Art Institute, March 27 to April 8.

**NEW YORK, N. Y.**—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Pictures by J. B. Jongkind:* at the Durand-Ruel Galleries, 389 Fifth Ave., March 7 to 21.

*Pastels and Water-colors by Edwin A. Abbey:* at the Avery Galleries, 368 Fifth Ave., March 9 to 21.

*Paintings by Arthur B. Davies:* at the Macbeth Gallery, 237 Fifth Ave., March 9 to 21.

*Exhibition Illustrative of a Century of Artistic Lithography:* at the Grolier Club, until March 28.

**PHILADELPHIA, PA.**—*Sixth Annual Exhibition of Water-colors and Pastels:* at the Art Club, March 23 to April 19.

**PROVIDENCE, R. I.**—*Exhibition of the Providence Art Club:* opened March 4.

*Second Annual Exhibition of the Society of Painters in Water-color of Holland:* at Jackson Galleries, 301 Westminster St., opened March 18.

**WASHINGTON, D. C.**—The Art Gallery of Thomas E. Waggaman will be open to the public on Thursdays during March and April.



**ONE OF THE "OLDEST HOUSES."**—The oldest house in the United States is, it is claimed, the house of Dr. Carver, of St. Augustine, Fla. In it he has surrounded himself with a collection of antiquities connected with the history of Florida and the Spanish, who once ruled it, that is of itself a veritable museum. The house was built in 1502, and was occupied by monks before St. Augustine was founded. In some places the wood has rotted away and has been renewed, but much of the old hand-hewn timbers and boards are still in fine preservation, and the walls and floors made of powdered shells, made into a plastic with sea-water and hardened with age, are still as firm as adamant. Some partitions in the house and several of the doors are the very parts taken from the cabin of a vessel found wrecked upon the shore when the house was built, and are of Spanish cedar. Dr. Carver's collection of curiosities contains relics connected with the first Spanish settlers that date back into Moorish history one thousand years ago. And, by way of proving that there is nothing new under the sun, the famous nickel-in-the-slot machine has a progenitor in Dr. Carver's collection. It is a slot machine used in the fore part of this century to deliver packages of tobacco by dropping an old-fashioned big copper cent in the slot. — *The Collector.*

**THE PALAIS ROYAL TO BE DEMOLISHED.**—Though it is no longer the abode of royalty, and has long since ceased to be the centre of Parisian life, the Palais Royal is nevertheless so familiar a landmark of the French metropolis that the news of its projected demolition and conversion into a huge hippodrome, similar to that which formerly disfigured the Avenue de l'Alma, will come as a shock to the readers of the *Tribune* who have visited this city as tourists or lived for any length of time on the banks of the Seine. Built by the great Cardinal Richelieu in 1620 it has undergone many strange vicissitudes since then. It originally bore the name of the "Palais Cardinal," which was changed when Richelieu presented it to King Louis XIII, to its present name of "Palais Royal." On the death of this monarch it was used as a residence by Queen Anne of Austria, Regent during the minority of Louis XIV, who was brought up there and who in 1700 gave it to his nephew, the Duke of Orleans, as part of his marriage portion, on the occasion of his union with Mlle. de Blois. Toward the close of the eighteenth century the debts of that Duke of Orleans who bore the surname of "Egalité" grew so enormous and pressing that he transformed the apartments on the ground floor of the palace into shops for the purpose of increasing his revenue. During the First Empire it was inhabited by Prince Lucien Bonaparte, and after the Restoration by the Duke of Orleans, who afterward ascended the throne under the title of King Louis Philippe, the latter assigning it as a residence to his eldest son and heir, who was killed in the Rue de la Revolte, while trying to get out of his carriage in a runaway. In 1848 it was entirely devastated by the revolutionary mob; but after the *coup d'état* of 1851 was put into complete repair preparatory to being occupied by Prince Napoleon and Princess Clothilde. Since the overthrow of the Empire the residential portion has remained unoccupied, gradually falling into decay, while with the drift of Parisian life westward it has gradually

ceased to be the popular resort that it used to be during the first fifty years of the present century. In those days all the principal restaurants were within its precincts, the "Véry," the "Véfour" and the "Trois Frères Provençaux" being among the most famous. Interspersed among these restaurants were the principal shops of the capital, especially those devoted to the sale of jewelry, while upon the first and second floors were all the leading gambling resorts. Indeed, there is probably no single spot on the entire Continent of Europe, not even Monte Carlo, where such immense fortunes have been squandered as at the public tables of Frascati and of other gambling-shop keepers of the same stripe. The gardens, adorned by beautiful fountains, statues and fine lime-trees, constituted the daily afternoon resort of all that was most brilliant in the political, literary, military and social world of Paris, and if the weather was bad the rendezvous took place underneath the spacious arcades which surround the building, both on the outside and on the inside. Columns, indeed, might be written about this, once the most characteristic feature of Parisian life, which is now about to disappear. There is simply no end to its interesting associations, and tawdry, decayed and disreputable looking though it has become, yet its disappearance must be a source of regret to all those who have any regard or veneration for olden times. — *Correspondence of the N. Y. Tribune.*

**THE COLOR OF A BUILDING AS IT AFFECTS OTHER PROPERTY.**—There are many stringent regulations to secure the amenity of Paris, but none of them appear to relate to color. A man may paint his house in any colors which please him without receiving a visit from a municipal officer. What is more remarkable, his neighbors, although they may be shocked and suffer in business from the colors, cannot obtain the least softening of their crudeness. A case, which exemplifies the law on the subject, came lately before the Tribunal Civil. The owner of a house in the Rue Montesquieu, one of the small streets near the Palais Royal, had it freshly painted in ultramarine, with great bands of red to serve as grounds for announcements of the various departments of his business. He was a contractor for advertisements, and, of course, he was eager to display the possibilities which were attainable under his direction. The owner of the opposite house was troubled by the chromatic spectacle, and his tenants, who followed a variety of art industries, found that the reflections and refractions from the blue, red and white made it difficult for them to harmonize colors, and their assistants threatened to leave through a fear of ophthalmia. So much misery was alleged to be produced, the claim for damages seemed insignificant, for the amount was only 5,000 francs. The restoration of the house to its ancient sobriety of appearance was also demanded. The Tribunal decided that there is no law or regulation known in French courts to limit the right of a proprietor to please himself in the choice of colors for his house, and that it was one of the conditions of living in streets to endure inconveniences which might be reciprocal. The complainant was, therefore, ordered to pay the costs of the action. — *The Architect.*

**WATER-PRESSURE AT TWO HUNDRED FEET.**—A crushed mass of iron now lying in a scrap yard at Pittsburgh, demonstrates the tremendous pressure of water at a great depth. It was constructed for a diving-bell, and was intended for use in Lake Michigan. As originally constructed it was a cube about six feet square, tapering slightly at both ends. The material was phosphor-bronze, five-eighths of an inch thick. Each plate was cast with a flange, and they were bolted together, the bolts being placed as closely together as was consistent with strength. The side plates were further strengthened by ribs an inch thick and two inches wide, and the entire structure was strongly braced. The windows, intended to be used as outlooks by the divers inside, were three inches square, fortified with iron bars and set with glass plates one inch thick. The entire weight of the bell was 23,000 pounds. When completed it was sent to Milwaukee and towed out into the lake about twelve miles, where there was over two hundred feet of water, and was sent down for a test. The manufacturer of the bell was so confident of its strength that he wanted to go down in it on the test trip. It was well he did not. When it reached a depth of about two hundred feet, strong timbers which had been attached to it came to the surface in a splintered condition. Suspecting an accident, the bell was hauled up and found to be crushed into a shapeless mass. The inch-thick plate-glass bull's-eyes were pulverized and the entire body of the bell forced inward until none of its original outlines remained. On a basis of two hundred feet depth, the pressure that crushed this seemingly invulnerable structure was 86.8 pounds per square inch, or 353,924 pounds to each side of six feet square. The total pressure, therefore, on the cube was 2,723,548 pounds, or 1,361.7 tons. — *Indianapolis Journal.*

**DURATION OF OIL ON BRICKWORK.**—A number of experiments were recently made to ascertain the length of time that brick and sandstone are rendered waterproof or protected by oil. The three oils used were linseed oil, boiled linseed and crude mineral oil. The amount of oil and water taken up by the sandstone was very much less than that absorbed by the brick, although the area of the sandstone cube was much greater. Equal amounts of the raw and boiled oil were absorbed. The mineral oil, however, was taken up in much greater quantities by both brick and sandstone. By the end of twelve months the mineral oil evaporated from the bricks, but such was not the case when the other oils were used. After an exposure of four years, the bricks practically retained all their oil. — *Boston Transcript.*

**STATUE OF A GALLIC GOD.**—At Chassenon, in the Department of the Charente, noted for its brandy, a statue of a Gallic god has been found in an old well believed to have been filled up in the time of the invasions of the barbarians. It is two feet high, squatting like a Hindoo Buddha, and has the collar of the Gauls around its neck. — *Philadelphia Telegraph.*



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MARCH 28, 1896.



**SUMMARY:—**

The Insurance Companies and Acetylene Gas.—The Assault on the Falls of Niagara.—The Low Water-level in the Great Lakes.—The Associate Architect for the Chicago Post-office Building.—Death of N. W. Pratt, Engineer.—Changes in the Paris Plumbing Laws.—Traps as Frenchmen understand them.—How the Cost of the New Improvement is to be borne.—The Gilbert Stuart Memorial.—The Travelling-Scholarship of the University of Pennsylvania.—Proposed Monument to Pasteur.	137
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**A**n illustration of the power which the insurance companies possess over matters relating to building is to be found in their action in regard to acetylene. A company has been formed in New York to supply acetylene gas to houses, and a bill recently passed the New York State Senate, by a vote of thirty-eight to one, granting to this company the right to lay their mains in the streets. A day or two later, the Board of Fire Underwriters, which has been getting expert information in regard to acetylene, gave notice that all policies of insurance would be cancelled on buildings in which acetylene gas was used. The announcement of this decision caused a fall in the price of shares in the Acetylene Company, and, unless the Underwriters change their minds, the use of the new gas in New York is likely to be very limited.

**A** STRUGGLE, which should interest the whole civilized world, is going on between the Commissioners of the Niagara Falls Reservation and the great corporation which has begun to use the water of the cataract for producing power for sale. The Commissioners have, from the beginning, opposed the granting of any concessions for taking water from what is now a public stream, owned by the people of New York, but the Hydraulic Power and Manufacturing Company was influential enough to obtain certain rights, which have been successfully utilized. Now, the demand for power is increasing faster than the supply. The Pittsburgh Reduction Company, which was the first important industry to establish itself at the Falls, and which, it is said, contracted for all the power that the Company could give it, and more than it could use, simply to prevent competitors from sharing the supply of cheap electricity which it had secured, after making, last year, eight hundred thousand pounds of aluminium, will make this year thirty-six hundred thousand pounds, and finds the demand increasing so rapidly that it has renewed its entire plant, after nine months' use, and urgently asks for more electric power. In order to furnish this, as well as to provide for the future, the Power Company has enlarged its canal, and proposes to use it to secure three hundred thousand hydraulic horse-power from the cataract. As the Reservation Commissioners look with less favor than ever upon this proposition, and as the Attorney-General of the State, on their application, has pronounced an opinion, to the effect that the statute creating the shores of the river a public park, in connection with the undoubted ownership of the river by the people of the State, renders it unlawful for any person to take water from the river for the purpose of developing power for sale to others,

an attempt has been made, by a bill now pending, to legislate the Commissioners out of office; while another bill expressly authorizes the Power Company to divert enough water from the Falls to produce not more than three hundred thousand effective horse-power. Any one who is fond of arithmetical exercises will find instruction in calculating the number of gallons per minute that this will abstract from the cataract; but those who do not care to go through the calculation may be assured that it would make a serious impression on this, the greatest natural piece of scenery in the world; and those who do not wish to see Niagara spoiled should bestir themselves at once.

**M**EANWHILE, Niagara is threatened also from another quarter. Surveys by Government engineers and others have shown, beyond question, that the water-level of the Great Lakes has fallen considerably within the past twenty years, and is still falling; and, just at this inopportune time, the City of Chicago is busily engaged on a canal, to drain them still further, and send their waters into the Mississippi River. What effect the Chicago Drainage Canal will have in lowering the water-level of the Lakes, no one can yet say accurately, but it will have a very considerable effect; and the Government engineers are already inquiring whether the community of the United States at large has not interests in these great inland water-ways, which the City of Chicago is unlawfully encroaching upon. As the Niagara River is the outlet of the Lakes, any variation of the lake-levels at once affects the cataract; and, as the water of the American Fall is only eighteen or twenty inches deep, where it curves over the cliff to take its plunge, the abstraction of a few inches from the surface would change its aspect materially. Of course, we are glad to have Chicago well drained, although we have serious doubts as to the propriety, moral or economical, of a scheme for draining a navigable lake, for the purpose of washing the Chicago offal down to the people of Southern Illinois, and the States below; but the whole country has an interest in the Falls of Niagara, which it will be perfectly justified in maintaining, whether the people of Chicago like it or not, if the drainage-canal should seem likely to injure them.

**M**R. HENRY IVES COBB, of Chicago, has been appointed architect of the new Federal Building in that city, under the law permitting the Secretary of the Treasury to appoint in his discretion "skilled architects" to "assist the Supervising Architect" in the preparation of plans for public buildings. The public is certainly to be congratulated on the appointment. Mr. Cobb understands the peculiarities of the Chicago soil as well as any one living, and there is no danger that a building erected under his care will sink into the ground, like the present Government Building; while his skill as a designer will find ample field in a structure of the importance and solidity which would naturally characterize the Federal Building of Chicago.

**T**HIS country and, in fact, all the world owes so much to the men whom fate has endowed with the inventive faculty, that when one of these falls by the wayside the sense of a material loss is readily felt. Such a loss has befallen through the death of Nat. W. Pratt, for more than twenty-five years connected with the Babcock & Wilcox Co., during more than half of which he was treasurer and manager of the corporation, and since the death of the founder of the business its president. Born at Baltimore in 1852, he evidently inherited his taste for mechanics from his father, who during the war of the Rebellion was in charge of the Burnside Armories at Providence, R. I. This early association with tools and arms enabled him in 1884, to design, patent and build the first successful dynamite gun for throwing aerial torpedoes: the gun had a calibre of eight inches and a length of sixty feet. This piece of work which seems to have been done as a recreation and relief from the cares of his ordinary business life was accomplished in his capacity as consulting engineer to the Dynamite Gun Co. The fact of his long connection with the Babcock & Wilcox Co. and his eventual succession to the control of its great interest is evidence of his capacity as a business man. His

standing as an engineer is, on the other hand, shown by his membership in the American Society of Mechanical Engineers, American Institute of Mining Engineers, American Naval Institute and the Engineers' Club of New York City.

**T**HE completion of the new drainage works for Paris has been followed by the promulgation of a set of municipal regulations, intended to compel, gradually, the use of the new sewers. Every one knows that most of the houses in Paris are furnished only with huge vaults, into which descend pipes from the various stories, the use of water-closets being confined to hotels and the best class of modern buildings. Naturally, it would be difficult to bring about an immediate change from the old system to the most improved modern one, so the new rules are by no means strict. Water-conveyance in some form must, however, be used. "Every water-closet," the regulations say, "must be furnished with reservoirs, or with branches from the main water-pipes, in such a way as to give a water-supply sufficient to assure the complete cleansing of the bowls, and to carry the contents rapidly to the public sewer." This certainly leaves room for choice among plumbing appliances, and the details which follow are equally liberal. "The water so delivered in water-closets must reach the bowls in such a manner as to form a vigorous flush"; and "every water-closet bowl must be supplied with an apparatus forming a permanent hydraulic seal." This "apparatus" must evidently be a trap, but, as the ordinance further provides that such "apparatus" may be dispensed with, and the present system of open seats and pipes retained "on condition of the establishment, at the base of each pipe, of an automatic flushing-cistern, properly supplied," it would appear that the trapping intended is of the most primitive description.

**F**URTHER light on the official idea of a trap is given by Article 5 of the Regulations, which says that "Every waste-pipe from a kitchen sink shall have at its upper end a siphon-shaped bend, forming a permanent hydraulic seal." As nothing whatever is said about back-venting, the Administration appears to think that water will stay in these "siphon-shaped bends," and we fear that bitter experience may be necessary to undeceive them. We, who have been through the epidemics of typhoid and scarlet fevers, diphtheria and croup, caused by the dissemination of germs from the sewers through unvented, and consequently inoperative, siphon traps, do not need to be told that such "permanent hydraulic seals," as the Paris Administration prescribes, will have all the water sucked out of them by siphonage any time that a good-sized dishful of liquid is thrown down; and, as it is very common in Paris to lay the kitchen floors with tiles, with a fall to the centre, and to put there the household waste-pipe, nothing is more certain than that the dashing of a pail of water on the tiles, which is the usual way of cleaning up the kitchen floor, will be followed by the immediate disappearance of the "permanent hydraulic seal" in the trap below. In regard to other details of plumbing, the same curious ignorance is shown. Soil, waste and rain-water pipes must have a diameter of not less than eight centimetres, or about three inches, or more than sixteen centimetres, or a little over six inches; and soil-pipes must in no case be placed at an angle with the vertical greater than forty-five degrees. This extraordinary regulation will give architects plenty of trouble, if we are not mistaken. All soil-pipes must be carried above the roof; but, as no provision is made for back-venting, or for foot-ventilation, this is not a very great advantage, as the law requires, at the foot of each soil-pipe, a siphon-trap, with a seal of not less than seven centimetres, or nearly three inches, "in order to assure a hermetic and permanent barrier between the house-drains and the public sewer." Of course, this main trap will, so long as any water remains in it, simply insure the siphoning-out of the traps on the branch-pipes above, while it will itself be easily siphoned out by throwing down a pailful or two of water. It is curious to compare the solicitude of the Parisian Administration to defend the interior of houses against communication with the sewer by "hermetic and permanent barriers," which, in practice, would be anything but either hermetic or permanent, with the recklessness of some of our town authorities, who forbid the use of traps on main drains, for the express purpose of ventilating the public sewers through the house-pipes.

**A**MONG other curious rules contained in the new plumbing-regulations for Paris, it is provided that all drains and main traps should be of glazed earthenware, unless other materials shall be specially allowed; and the main drains must be capable of resisting an interior water-pressure of one kilogramme to the square centimetre, or about fourteen pounds per square inch. Even with earthenware pipes, this is a most modest requirement. With us, a system of piping which cannot be filled to the top with water, often giving a pressure, in the lower portions, of forty pounds to the square inch, without the slightest leakage from any point, is not accepted by any architect or inspector, and our plumbers find no difficulty in providing such systems. But if the Parisians are to have what we should consider a most inefficient type of house-drainage, they are obliged to pay well for it. All new houses on sewered streets must be drained in conformity with the law, and the owners of houses already built on such streets must, within three years, remodel their drainage according to the new regulations. After this is done, they must pay an annual "drainage-tax" amounting, for a house renting for six hundred dollars a year, to sixteen dollars per annum; and, for one bringing in a rent of twenty thousand dollars a year, or more, to three hundred dollars per annum. As most of the Paris houses are large buildings, let in apartments, the total rental of very many of them will be large enough to make the "drainage-tax" a serious matter to their owners or, rather, to their tenants, who will pay it in the end. In regard to the number of closets to be provided, the law says that, in all houses hereafter built, there shall be one to every apartment, or to every three rooms rented separately; and that the closet must be placed near the rooms to which it belongs, and, if not actually within the apartment, must be provided with lock and key. In stores, hotels, theatres, factories, work-rooms, offices, schools and similar buildings, the number of closets shall be decided by the Administration, at the time when the permit to build is issued, taking into consideration the number of people who will use them. This last is an excellent regulation, which deserves to be imitated here.

**W**E have before spoken of the movement to distinguish, by a suitable tablet, the grave of Gilbert Stuart, the Boston painter, who preserved for us the features of George Washington and Martha Washington, of Jefferson, Adams, Madison and Munroe, besides painting the portraits of King George III, of England, and many other European notabilities. Besides this tablet, it is proposed to erect a monument to his memory, giving, perhaps, some account of his works, and an association, called the National Stuart Fund Association, has been formed, with officers selected from all parts of the country, to carry out this purpose.

**T**HE examinations for the Travelling-Scholarship in Architecture of the University of Pennsylvania begin April 20, the examinations in Construction, History and Theory coming first, and, as usual, only those being admitted to the examinations in Design who have passed the others successfully. This year, however, those who have in previous years passed the preliminary examinations successfully will not be required to take them again, but are to be admitted to the examination in Design without further test.

**T**HE friends of the great Pasteur have opened an international subscription for a monument, to be erected in some public place in Paris, to the memory of the man who has, perhaps, done more to benefit the human race than any one else of the present century. A provisional committee has been formed, with M. Bertrand, Secretary of the French Academy of Sciences, as President, Professor Grancher, of the Academy of Medicine, as Secretary, and MM. Christophle, Governor of the Crédit Foncier, Majnin, Governor of the Bank of France, Dr. Bronardel, the Count Delabords, Baron Rothschild and others, as members, to ask for subscriptions, in order that an idea may be formed of the amount of money that can be raised, before a decision is made as to the character of the monument, or the place where it shall be put. Subscriptions may be paid at once, and will be receipted for, or will be collected at the subscriber's residence, if he prefers. If any of our readers would like to subscribe through us, we shall be happy to receive and forward their subscriptions; or they may be sent directly to the Commission Pasteur, 25 Rue Dutot, Paris.

ART IN THE MODERN CHURCH.<sup>1</sup>—XI.

## CHRISTIAN ARCHITECTURE.

IN the preceding chapters the most important phases of Christian architecture as it appears to be practised in our own day have been passed in rapid review. We have noted wherein this architecture is chiefly deficient, namely, in an appreciation of Christian thought and feeling. Church art is not synonymous with Christian architecture, though it may be supposed that an increased use of "art" in modern churches is bringing us nearer a new and better ideal of church architecture. Yet just so far as this movement ignores the element of Christianity, just so far as there is a drift away from faith as expressed in building, we are moving, as rapidly as we can, from the true ideals of Christian architecture.

It will be agreeable, after the many monuments of un-Christian feeling we have noted in our study, to glance briefly, in conclusion, at some few churches that illustrate a devout and reverential feeling, even though they may not rise to the utmost heights of Christian architecture. The conditions under which architects produce designs in America are not conducive to religious work. It is often difficult for a busy architect, whose time is consumed with a hundred matters of detail, to find time for that careful and prolonged consideration of a design which is essential to the securing of the best results. Much is necessarily assigned to assistants, working under conditions which render it quite impossible for them to enter into the spirit of the architect. If, therefore, but a few churches can be found built in a true Christian spirit, there is as much reason for congratulation as if it were possible to produce such buildings every day. The English are infinitely better off in this respect than we in America, since many modern English churches illustrate, in a very noble manner, the possibilities of a modern Christian architecture, which is Christian as well as beautiful and harmonious, admirably suited to the sacred rites of worship. These churches are the most considerable monuments, and the most notable, produced by the High Church movement within the Church of England.

That is it, some one exclaims, you are writing for the High Churchmen; they and no other. Not at all. I cite these instances simply to show what can be done in our own day in producing Christian buildings. This art was most nobly developed in the Middle Ages, in the great Gothic period. In the Renaissance pagan models were so eagerly used for everything, that the church lost the purity of feeling and deep religious expression that had hitherto distinguished it. Yet the peculiarly sacred character of the church building had been so ingrained in people's natures, through many hundreds of years of reverence and illustration, that this feeling was not wholly lost in the Renaissance. Many of the churches of this epoch show a spirit of refinement and loving care for detail that approximates the religious in effect; and with a genuine Christian sentiment, albeit their form and structure are wholly different from Gothic churches.

<sup>1</sup> Although the author of this paper has drawn the greater part of his illustrations from designs that have appeared in this Journal, he and we are under obligations for the remainder to the *Inland Architect*, the *Northwestern Architect* and to *Architecture and Building*. Continued from No. 1044, page 146.

To our own age has been reserved the task of completely secularizing the church building. Never before was it supposed that God would be pleased with any sort of a building to be used for worship; never before was it imagined that we could offer secondary gifts to Him and reserve the best for ourselves, for our private art-galleries or our public collections; never before was there so great a debasement of Christian art; nor did ever any epoch that pretended to artistic knowledge and appreciation—as ours professes—so wantonly neglect the plain and natural requirements of this most important phase of art. And if, in this degradation, this turmoil, this indiscriminate mixing of all things, this irreverence, this indifference, a few churches may be found that stand opposed to it all, that illustrate a pious art and a noble feeling, and stand as a protest to all the ungodly things our average churches stand for, should we not rejoice greatly? What matters it, then, if these churches do belong to one religious body? If one group has gone beyond the others and joyfully expressed this feeling in its churches, it behooves other Christians to study the *spirit* of that art, if not the form of the buildings.

And, after all, it is the spirit of art in every age that we moderns need to concern ourselves with, rather than the forms. The forms, indeed, are more evident, they may be more readily grasped and understood, they may be copied and reproduced and used in all sorts of ways for all sorts of purposes. But the spirit of art is a delicate and elusive property. It is the soul, present in every great and true work; it cannot be located or singled out, examined or specifically discussed. Yet its presence is felt in every part. Take it away, and the deadness of death falls upon the work, just as life departs from the body with the extinction of the soul; and this most elusive presence, this indefinite accompaniment of art, is the one great thing we need to study in every phase of art, be it old or new. Its qualifying presence, more even than the beauty of form, is the chief lesson the history of architecture has to teach us.

Few modern buildings illustrate this noblest of artistic elements. The conditions under which they are produced, as was hinted at but a short space back, do not tend to its development. And more especially the religious quality is absent from modern work, though our time prides itself on its religious development, its missions, its hospitals, its charities, its religious press, the power of its pulpit. It

is not for want of activity that our church buildings are deficient in religious feeling, but for lack of knowledge of the possibility of exhibiting this feeling in architecture—that and the indifference to the refinements of religious detail in every visible form. People do not know that their religious beliefs can be expressed in the church building, or that they should be. Nor do they realize that in adorning God's house they can set forth these same beliefs and hopes, to the comfort of many souls, and to the constant edification of the faithful. And the mere lack of this knowledge is not the worst of it, for so long have such things been forgotten and ignored by us that their utility would, by many, be scoffed at and ignored.

Yet who, when they pass under the Bradley Memorial Gate at Fort Hill Cemetery at Auburn in New York (Fig. 58), if they are in the mood to notice such things, would not feel better for this noble and interesting group? Here is no eccentricity, no striving

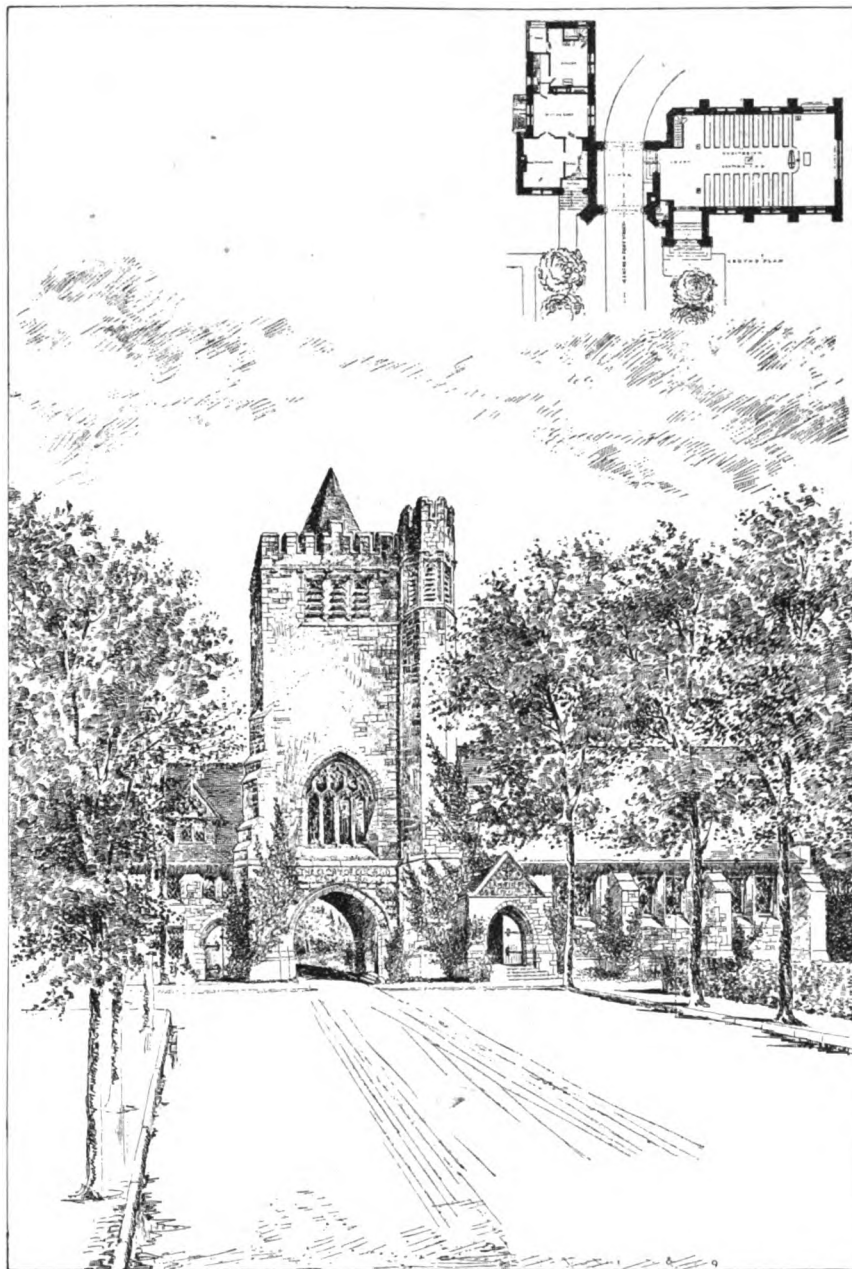


Fig. 58.



for effect, nay, no marked effort to do some one thing which had never been done before. On the contrary, there is a real artistic spirit, duly tempered to the uses of the buildings, partly ecclesiastical, partly utilitarian, and withal a fitting entrance-way to the final resting place of the dead. There is comfort in the very stones of this tower, for those that will but look for them. It is a delightful bit of work, carried out in a spirit of reverence.

The chapel for St. Paul's School, at Concord in New Hampshire (Fig. 59), is a simple little design that directly tells what it is. Plain and almost severe in its architecture, its author has thrown so much feeling into his work as to have obtained a distinctly religious character by the use of the simplest forms. In this respect the design is quite remarkable, since it is so frequently supposed, in modern work, that the more variety put into design, the more ornament used upon the buildings, the better it must be. There is no ornament here, save in the parapet and the pinnacles of the tower. The architect has used nothing but plain wall and traceried windows, and with nothing else has given an unmistakably religious stamp to his building.

Quite as simple in its forms, and yet thoroughly a religious building, is All Saints' Church at Ashmont in Massachusetts (Fig. 60). This would be almost a bald and barren design save for the feeling its authors have put into it. It was not a hasty effort, sketched at random for a picturesque effect. Picturesque it is, and beautiful and graceful, but above all it speaks directly of Christian faith. A fine religious spirit has transformed the plainest materials into a thoroughly beautiful structure, that, more than testifying to the skill

The Church of St. Mary the Virgin, in New York (Fig. 61), is not only one of the most recent churches in the metropolis at the time these lines are written, but one of the few that great city possesses which is distinctly a church. Its designers were fully aware of the consecrated nature of the task assigned them, and they carried it out in a thoroughly sympathetic and beautiful manner that has given them a success not to be measured by pure architectural ability. The design is a simple one: a front, so narrow as not to include the full width of nave and ambulatory, placed between two adjoining

houses that are part of the church group, and yet which are rightly houses, with only needful and slight touches to mark their ecclesiastical connection without giving up their residential or non-churchly character. As a design the church is only a façade, since its side walls are encased between the adjoining buildings; yet it is eminently successful as a church and to have accomplished this result within such narrow, crowded limits, in themselves unchurchly, is another triumph for the architects.

The façade of the church is eminently dignified, quiet, sober. The detail and ornamental features are generally well chosen, ably applied and used only with structural significance, the niches

on either side of the door being legitimate ornaments. Within it is as successful as without, and much more imposing. It is a church of great length, with a fine proportion of height that adds to the impressiveness of its structure. A narrow aisle, with relatively high vaults, is carried wholly around the central nave and choir, and adds greatly to the charm of this interior. The design is conceived with a fine appreciation of the needs of the church; it is carried out



Fig. 59.



Fig. 60.

of its designers, speaks directly of the spirit it exemplifies. The calm and peacefulness of this structure are in striking contrast to the unrest and variety of many a more pretentious church. Yet it is done with so little!

with great ability, and the result bears the mark of that genuine appreciation of the true quality of church architecture that makes this structure one of the most notable churches in New York and one of the most successful in America. It is not a church to be



copied and repeated; but it is one to be studied and one from which many a useful lesson may be drawn.

The Judson Memorial Church, in New York (Fig. 62), is an interesting building, unmistakably a church. Much of this effect is owing to the closeness with which it follows the ancient Italian church on which it is modelled, whose general form is reproduced,

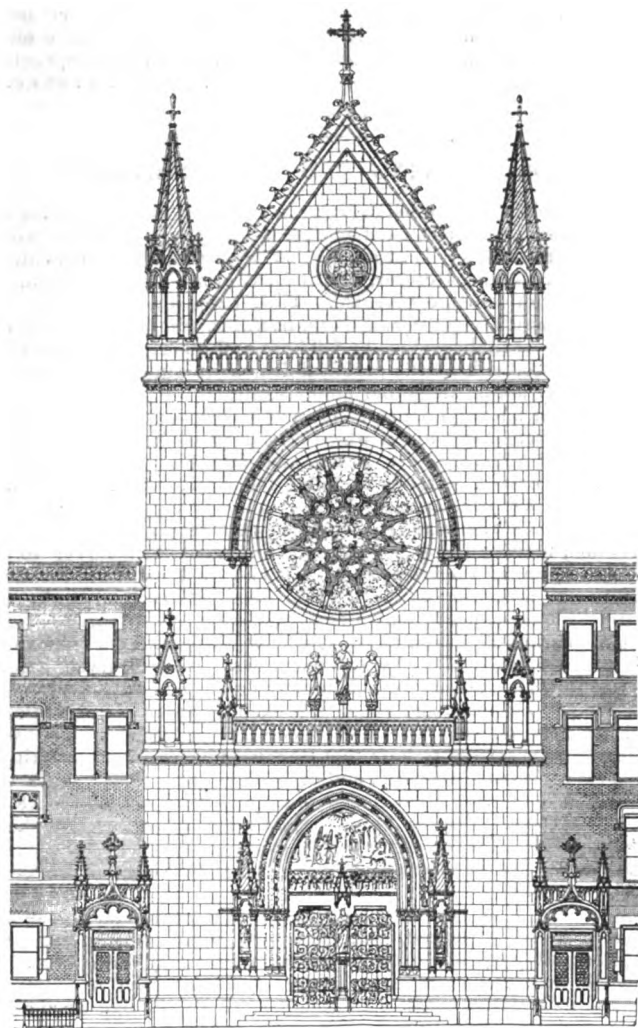


Fig. 61.

though the detail has been considerably changed. The proportions of the church are not altogether happy; the building is scarcely deep enough for its width, but the design is an exceedingly beautiful one. The ornamental detail, confined to bands in the basement and to the cornices above, makes no pretense to be Christian; yet, notwithstanding its richness, it is well retained within natural limits. Everything is orderly. The authors of this design exercised so fine an artistic feeling, chose their detail so well, and above all were content to reproduce an old Italian church full of the Christian idea, that their building reflects, in very large measure, the true feeling. Standing on the borders of one of the least religious parts of New York, a region filled with crowded tenements and overflowing with a careless and indifferent population, it serves as a beacon, pointing the way to the new life, withdrawing men's cares and worries from this world, and suggesting hope above. Is not that something to accomplish in architecture? And are not the people who live beside it, the better for such a monument at their doors, even though they may not understand its full significance?

A concluding example (Fig. 63) is from the same hands as the beautiful Church of All Saints, at Ashmont. Here, again, is the scholarly, refined, artistic Christian spirit that makes these churches, perhaps, the most notable contributions to Christian architecture yet produced in America. In examining these designs the first quality that impresses one is the simplicity of the parts. The architectural forms are of the slightest, the detail subdued and refined, yet all have been welded together with so much reverential feeling, with such a true spirit of Christian faith and hope, that we feel instinctively, not only in the presence of masters of the art of architecture, but before the work of men who have more to tell us than the skilful handling of stone and mortar, who, in a word, have a message of piety to convey in their buildings. Here, in truth, is a quality we do not find in secular structures, a quality that we feel, without, perhaps, being always able to give it name nor to describe wherein it consists. And so, while we enjoy the architecture of these structures, we can take away with us a new sense of reverence in building and a new appreciation of the possibilities of modern architecture.

In the preparation of these chapters many hundreds of designs of recent American churches have been examined. Of all this vast array, scarce more than the handful shown in this chapter bear the test of Christianity as exemplified in architecture. It is a favorite axiom of the historians of art that the architecture of any time accurately reflects the culture and civilization of that epoch. And it is further generally agreed that this reflection is not visible in our own architecture, because our age is one of complicated and manifold culture to which architecture is only an accessory, not an essential. It is well that this is admitted, since, if we were to judge our modern religion by its architecture, a sorry sort of a religion it would be: eccentric, varied, mixed, wandering, ugly, unreasonable — all these and many more evil things that have no part in Christianity.

The result of such a study is most depressing. It is scandalous and shocking that out of the thousands of churches built in this rich land of ours every year, so very few should illustrate a pronounced Christian spirit, and they alone speak of other things than the skill of the architect in choosing his parts and in arranging his materials. The wheat that is winnowed from so much chaff is so small and slight, comparatively, as to scarce do more than add sorrow to the critic's duty and bring shame to our Christian people.

And the pity is the greater since this results from ignorance alone. It is not because people do not want to build churches or have not the means to do so. The production of churches in this country is very large, and many of them are very costly edifices. Moreover, it costs no more to give a Christian effect than to ignore it; in many monuments it would result in an actual saving in expenditure, since Christianity is not concerned with fussy excrescences of ornament and enrichment with which many of our larger churches are burdened, yet which contribute nothing at all to their Christianity. In asking for a return, therefore, to the elementary ideas of Christian architecture, no fresh burden is laid upon the builders of churches. To argue on the lowest plane, that of actual cost, it would be money in pocket, while the gratification of having produced a truly Christian structure could not readily be estimated in secular coin.

The trouble is, the larger part, by far the larger part, of our church building is conducted on wrong principles. The forms of the service, the particular beliefs of the religious bodies concerned have nothing to do with the architecture or the art of the church. Every church must be the house of God, else it cannot be a church. Surround it as we may with subsidiary buildings, with parlors, kitchens, clubs and schools and all the paraphernalia so frequently adopted to promote the social life of the church and to win sinners from the evil of the world, this fact must not be overlooked as the basis of all church-building. How impious then, how sinful to build God's house as we would our commercial buildings, or our theatres, to apply to it the same art we would use promiscuously in any sort of a structure! In no other instance is a keener sense of architectural propriety more needed, and in no other instance is it more deliberately ignored and passed over.

Yet this ignoring of the Christian idea in Christian architecture is seldom maliciously or deliberately done. The sin of un-Christian building is not committed wilfully nor with joy that so much evil could be perpetrated. The error lies, not so much in the doing of what ought not to be done, but in not knowing what should be done.



Fig. 62.

Yet the teachings of the history of religious architecture are plain enough; the Christian monuments of the various eras of Christian building are familiar enough: the architects of to-day are skilled in their art. It is not because we cannot, but because we do not know. That is the modern American estimate of church-building, and the reason why our churches so lamentably fail in illustrating the very

thing they were built to express. That a few among us have risen above the sordid and irreligious depths our thoughtless practices have led us to, is comforting, in showing that the art of Christian building has not been wholly lost among us. It is a forgotten art, in a sense, yet it has been revived, and, please God, it will be revived again. But before this revival can affect our church-building as a whole, much must be done in disseminating a knowledge of the principles of Christian architecture and art. What these principles are, every Christian knows when they are applied to morals: transfer them to architecture, and the goal will be reached.

It will be noted that all the churches selected as illustrating Christian architecture in our own time, save one, are Gothic. Are we then, it may be asked, to return to the Gothic and nothing else? The Gothic has the distinction that belongs to no other style, of having been developed under conditions essentially Christian. Its period was, perhaps, not more religious than our own in the strength and intensity and the diffusion of the Christian life, but it was an age in which religion filled the thoughts of the people in a fuller way than with us. The people of the Middle Age had fewer things to think of, fewer things to do, fewer things to distract their attention. The culture of the time was centred in the Church, and it led the people actively and aggressively, as it never did before nor since. The architecture of this period, which we call the Gothic, is, therefore, more especially Christian than any other. It was developed among Christian people, and its finest monuments — glorious structures testifying in every stone of reverence, faith, joy, love and charity — were churches dedicated to God's service.

No other style has had this distinction, nor has any other style so accurately and beautifully expressed man's faith in his Creator. The Renaissance was, above all, a secular art, though some mighty churches were built in it, one the mightiest in all the world. But it did not so readily lend itself to the exclusive and peculiar requirement of God's house. In our own day there has been much said and written on this subject, and some of those who think on this



Fig. 63.

topic claim that the Gothic is the only style to use in our churches, while the opposite position — that the Renaissance is the only modern style for any purpose whatsoever — is as stoutly maintained by others.

As a matter of fact the battle of the styles does not need to be fought over the churches. It is not the style that makes a church, but the feeling put into the building, the reverence, the faith, the hope for mercy at the judgment seat. If an architect can express a true Christian feeling with the materials of the Renaissance, it becomes an opponent to rise up and declaim against his church because it is not built in the proper style. It is an accident, not a choice, that the buildings here selected to illustrate the Christian spirit of our modern churches are of the Gothic style. They are chosen, not to insist upon a Gothic development, but because I know of no churches in another style that so well illustrate the principles of Christian building.

Nor are these to be understood as the only beautiful churches we have. America contains many fine churches, beautiful examples of architecture, richly and splendidly decorated; and simple graceful edifices that are naturally placed in a delightful environment. But a beautiful church is not necessarily a Christian-seeming building, nor does a structure, because it is magnificently ornamented, set forth the glory of God. It would be easy to cite examples of interesting church buildings, fine and beautiful; but such buildings are not Christian for these reasons, nor do they express the architect's reverential love for his work, nor the builders' hope for the future. In a word, our largest, finest churches are not types of Christian architecture, though we may admire them as types of architectural cleverness or of skilful design.

It is not pretended that the examples here shown make up the sum and substance of Christian architecture in America. There are many churches which show, in part or in some one feature, a real Christian feeling that is striving for expression. But such examples are not fully developed types, nor do they show, as in the instances illustrated, a feeling of Christian truth that is profound in its intensity. Yet even these parts of churches, this half-developed expression, this incomplete treatment is not to be despised. Rather it hints at a future when Christian work will be abundant, and the realities and possibilities of Christian architecture magnificently shown.

Yet, side by side with these glimmers of the truth are most preposterous churches that could only be built in a period of the densest ignorance. Our movements, as a whole, are too uncertain. Without the restraining influence of real monuments of Christian art to guide us, we change from one style to another as the taste of the day dictates, or as the individual fancy of the architect leads us. But Christianity knows no time-limit for the repentant sinner; in time we will regret our present idiosyncrasies and surely once more see the glorious truths of Christianity expressed in art, once more see God's house a fit habitation for holiness, once more appreciate the value of art as the handmaiden of religion. BARR FERREE.

(To be continued.)

#### WOOD-CARVING AND WOOD-CARVERS.<sup>1</sup>

AS an architectural wood-carver it is necessary and better for me to treat this subject as if one were really talking in the workshop, for a carver is about the last person to talk of carving in the manner of the lecturer, and is, like other practical men, inclined to drop into the personal. This, I am afraid, will be my failing. There are gentlemen here, however, who will probably tell you of the beautiful carvings by Gibbons and others, so that perhaps my experience, with a little practical demonstration of my method of carving, may not be altogether uninteresting to you.

The essential requirements of a wood-carver are:—First, a strong firm bench, the top of which should be of beech, and at least four inches thick, two feet wide, and four feet six inches long; secure, but simple, methods of fixing his work. And, secondly, a good light. Of tools or gouges he requires a very large number, necessitated by the variety of designs that may come to him for execution, nothing being too large or too small for a carver to try his skill upon, let the result be what it may, and naturally the tools vary in size according to the work in hand. Repetition work, as a matter of course, needs only a few tools, sufficient to carry out the design, or want of design, as the case may be, and a variety of about two dozen would suffice for this purpose. A wood-carver, among his qualifications, should be able on any emergency to make, harden and temper his tools, and repair a broken or make an exceptional tool he may at any time find necessary for his use. You will probably be surprised to hear that learning to sharpen a good kit of wood-carver's tools properly, and in good working order, takes the apprentice or novice really longer to acquire than actually learning the use of them. For the harder woods a less acute bevel or sharp is required than for the softer woods, every gouge used by the wood-carver being, by the sharpening, a fine elongated wedge of innumerable sections.

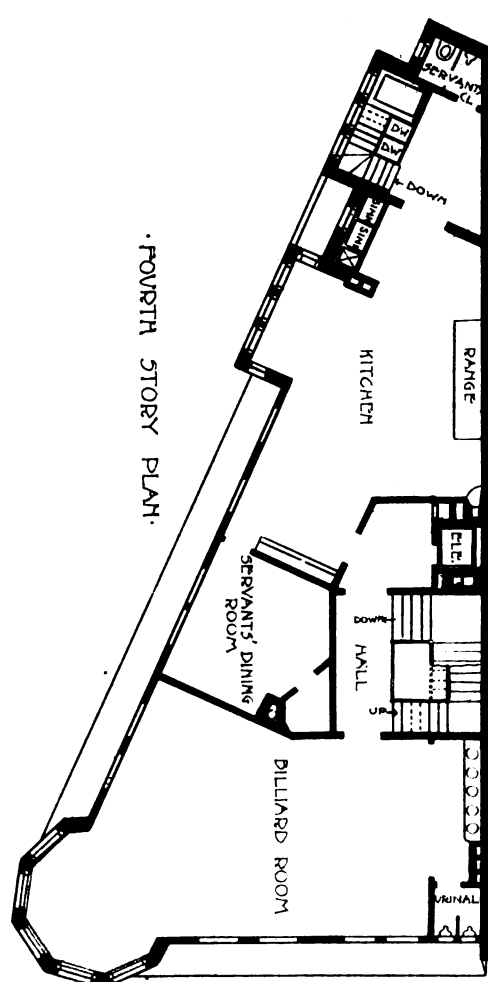
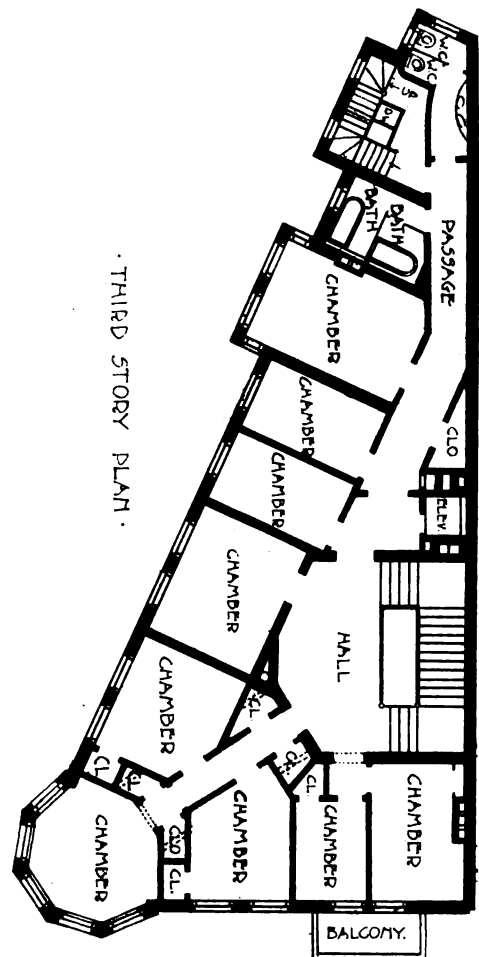
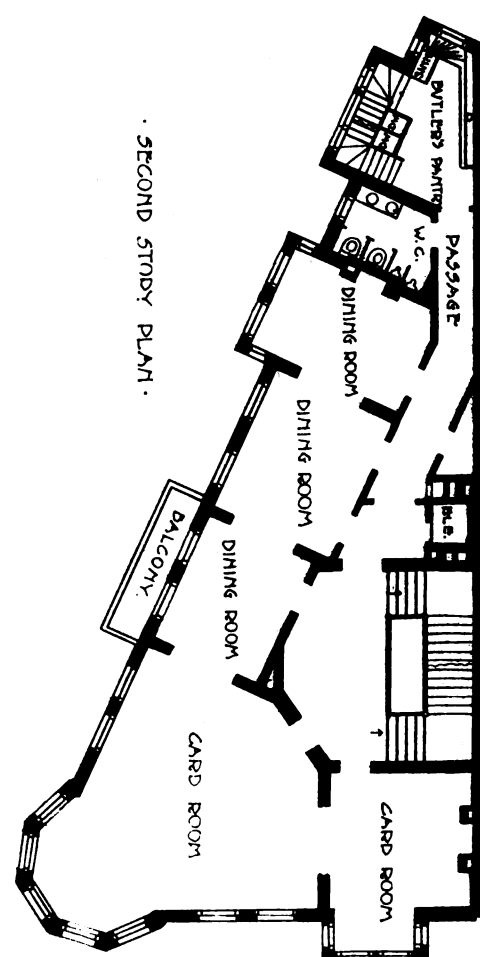
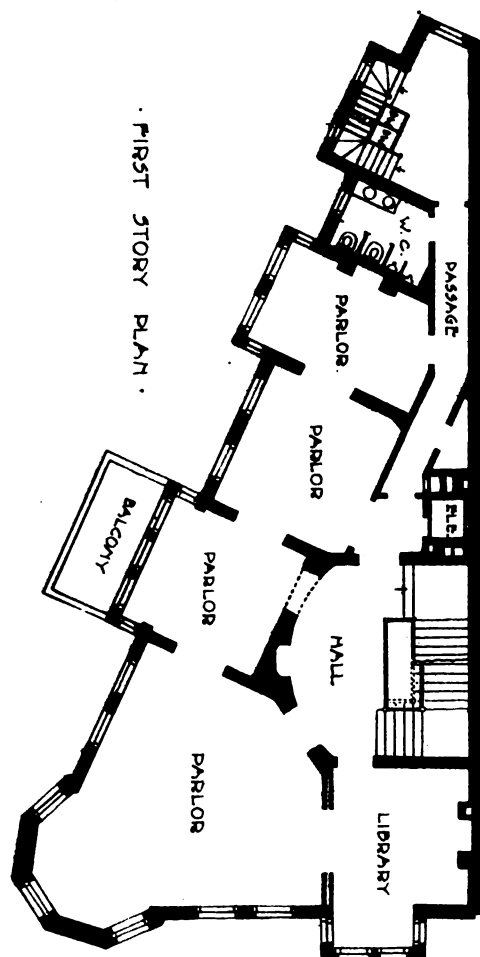
Of course, it is generally understood that nearly all woods are capable of being carved, oak, however, being mostly used for architectural purposes. Italian walnut is liked by the carver. It is tough, firm and reliable for projective or undercut work, or for fine and delicate carvings. A great deal of the foreign wood-carving is executed in lime, apple and pear tree, and other soft woods. All these are very pleasant to work, but are liable to worm and dry-rot.

Wood-carving in England for the last thirty years has been striving to raise itself above the cabinet and upholstery incubus, into which it had fallen for many generations, and efforts have been made by the establishment of the British Wood-carvers' Society, a body of craftsmen far too little known by kindred societies, to regain the position wood-carving held in the seventeenth and eighteenth centuries. There is a tradition handed down among wood-carvers that in those days members of the craft were highly esteemed, and were permitted to wear swords; but I can assure you there are British wood-carvers of the present day doing very ordinary work, but who are quite equal to the men of the seventeenth or eighteenth centuries, and who only lack the opportunity to exercise their knowledge and skill at the craft.

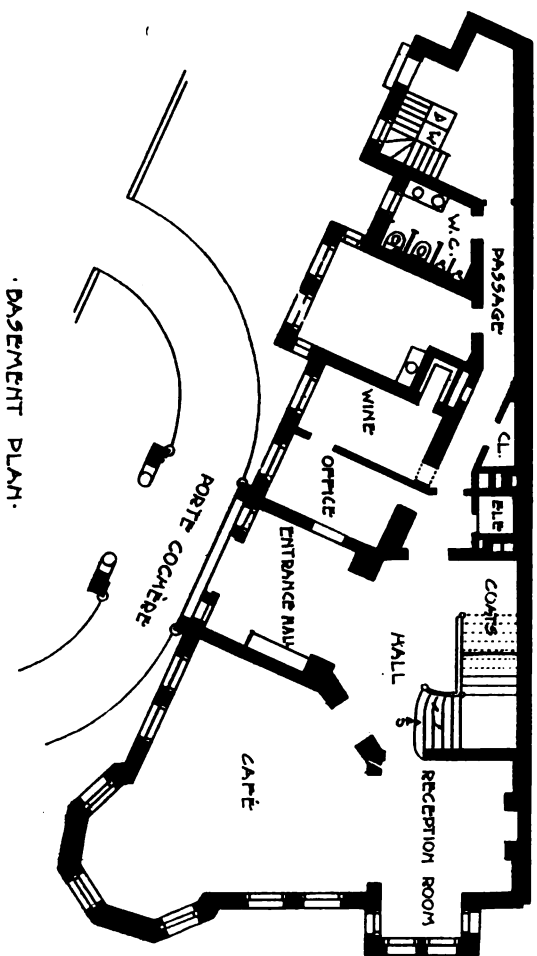
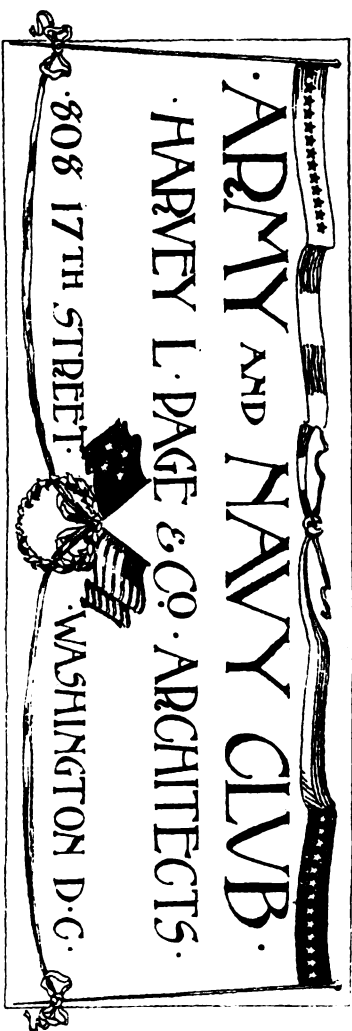
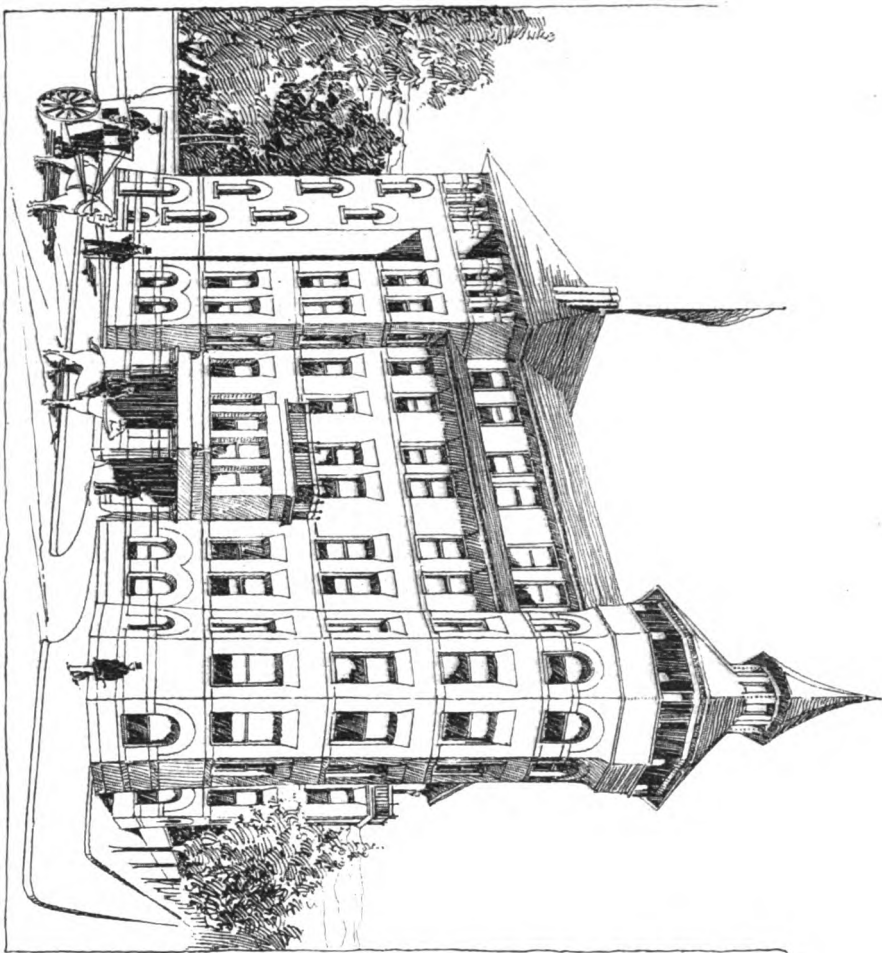
Wood-carving is an absorbing, fascinating, but a time-taking occupation, and the results of his labor are, as a rule, gratifying to the executant, whatever his architect or client may subsequently think of his work. One of the chief drawbacks a carver has to contend with is the limited time generally at his disposal for the proper consideration and execution of the work. It often happens that he is compelled to complete his work, not that it is quite satisfactory to himself, but because of urgency on the part of builder or client; or, on the other hand, he may have expended all the time the price in his estimate will allow without bringing his remuneration down lower than a dock-laborer's — which is easily done — and only an expert could detect the difference in the quality of work. As a fact, a few years ago myself and staff worked for several months on a job, at the completion of which I was not one shilling the better off, simply because it was nice work, and I would not stultify myself by putting in an inferior quality. Many years' practice is necessary to enable one to estimate readily the cost of carrying out a design which might bear two constructions, viz., either very simple in treatment, or full of fine details and exceedingly rich. It is this estimating that frequently floors the carver. I know men, middle-aged, and carvers all their lives, quite unable to estimate their work, their guesses being either ridiculously high or absurdly low.

<sup>1</sup> A Paper by Mr. J. E. Knox, read before the Royal Institute of British Architects.







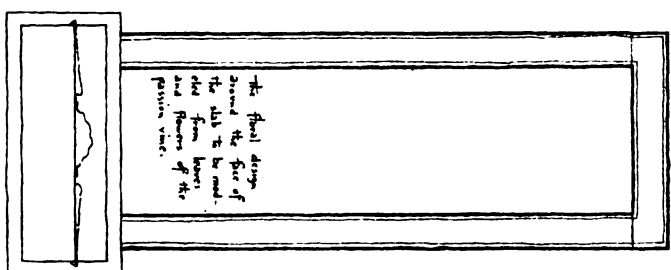


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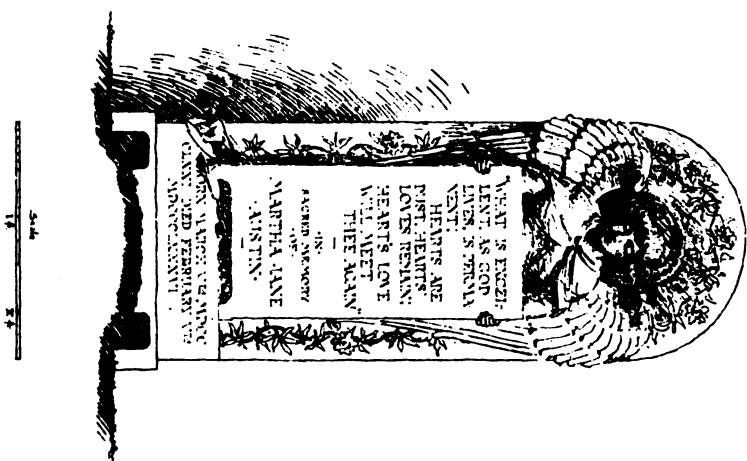
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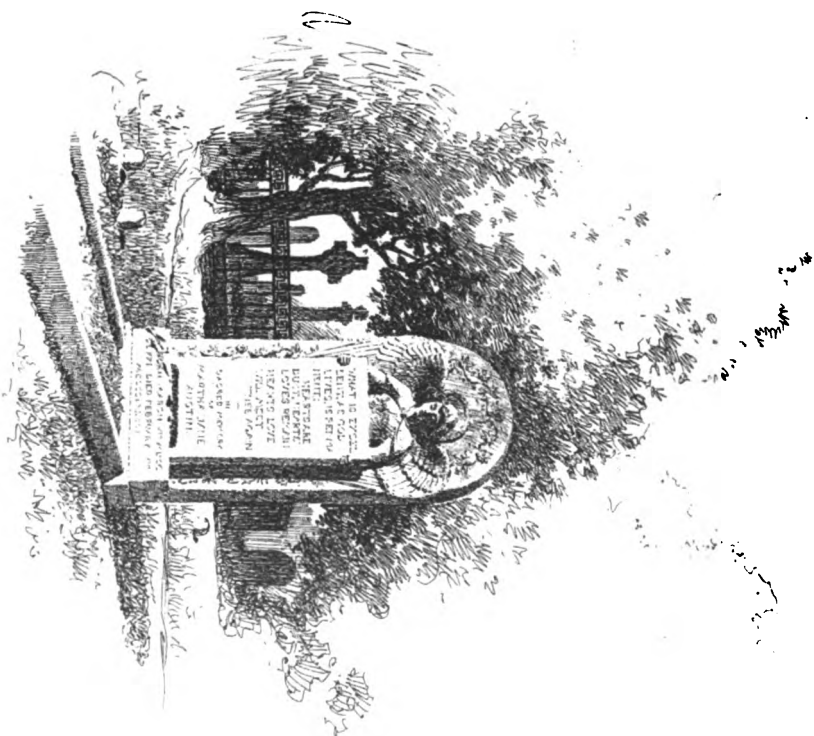
**PLAN**



**SECTION.**



•ELEVATION-



• PERSPECTIVE •

“A MEMORIAL TO MARK THE FINAL RESTING PLACE OF A  
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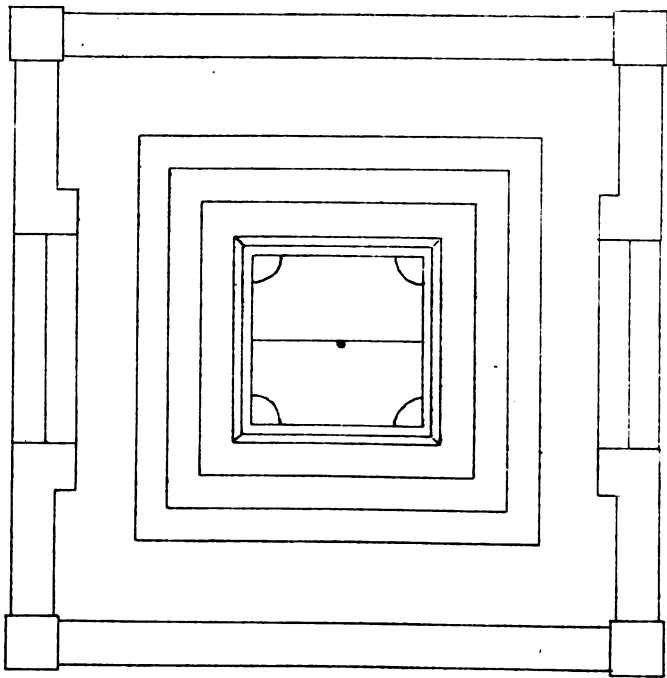
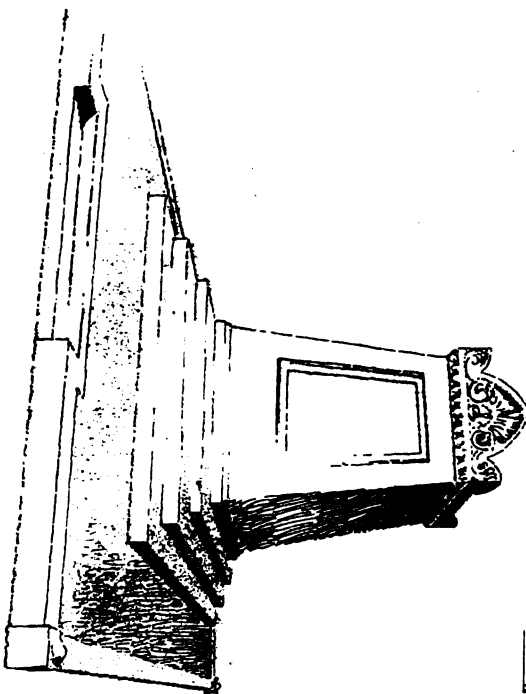
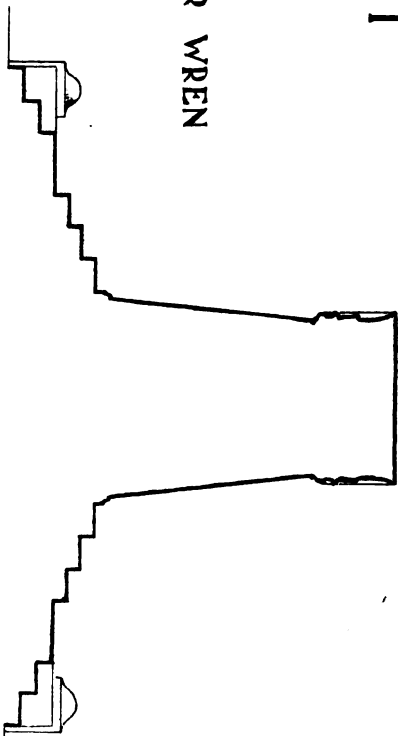
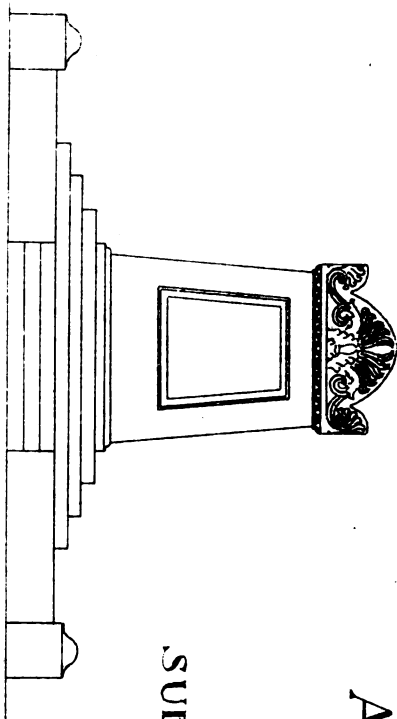




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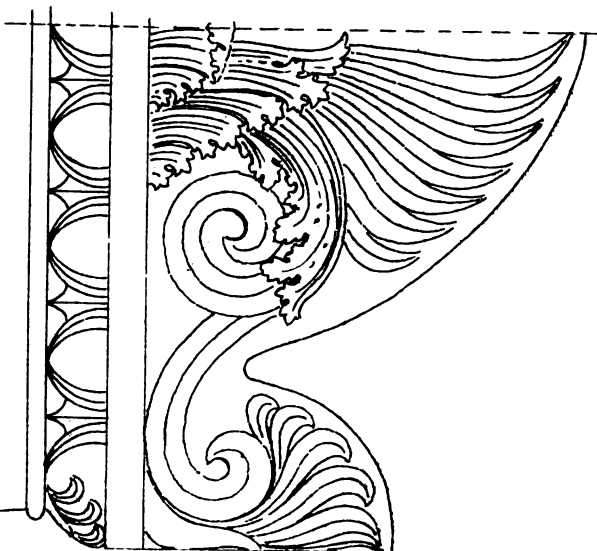
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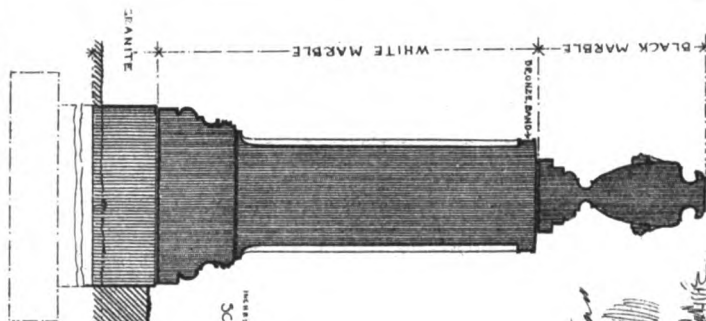
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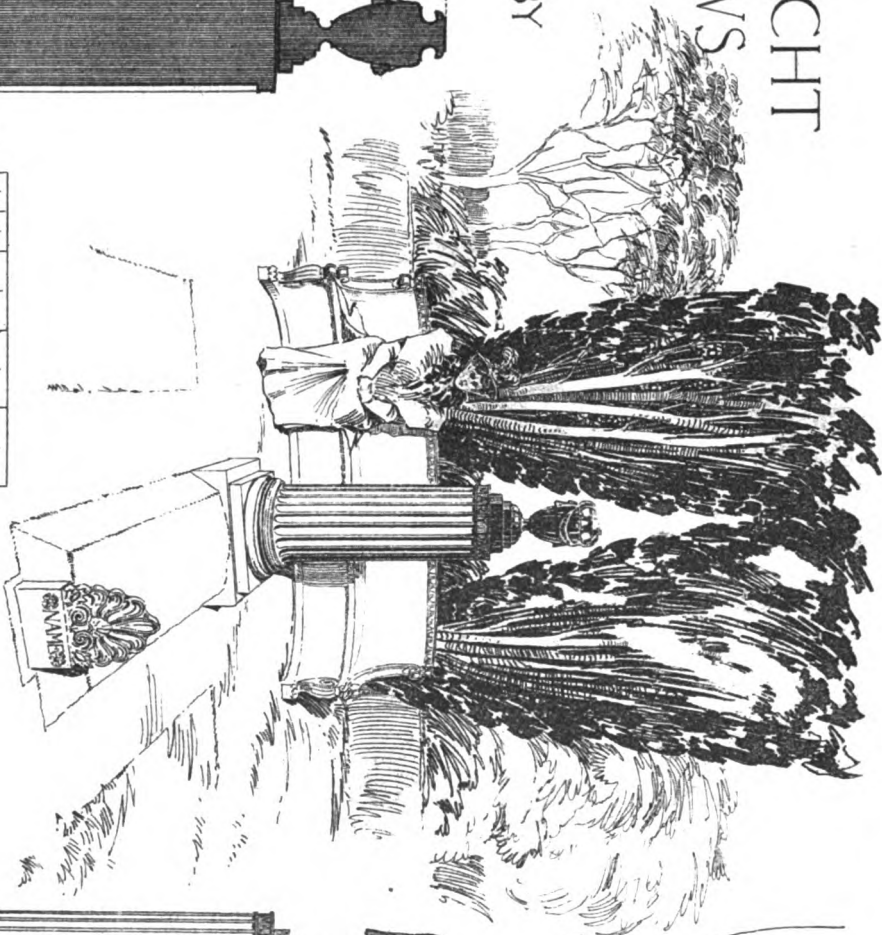


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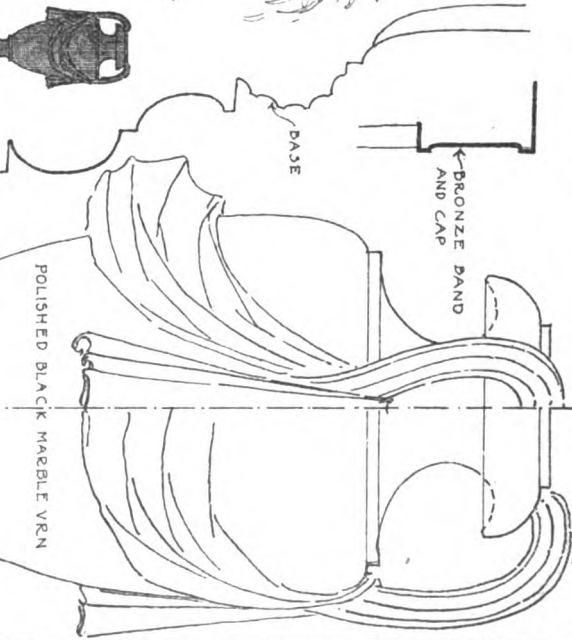
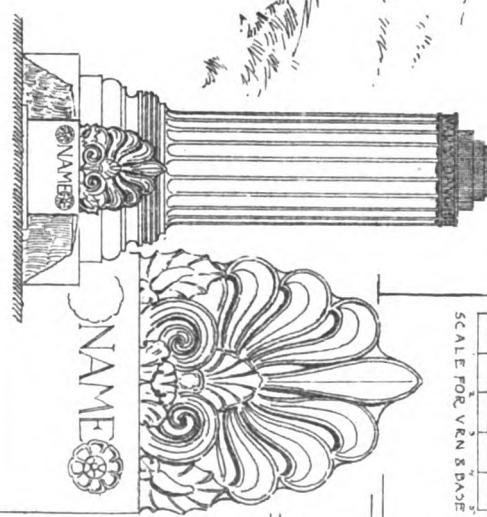
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SECTION



ELEVATION

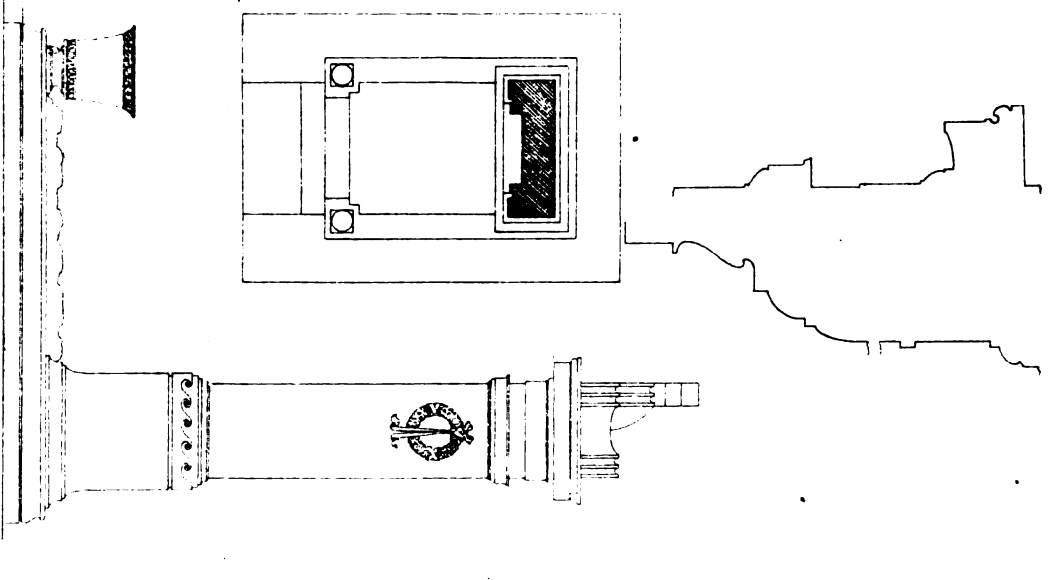
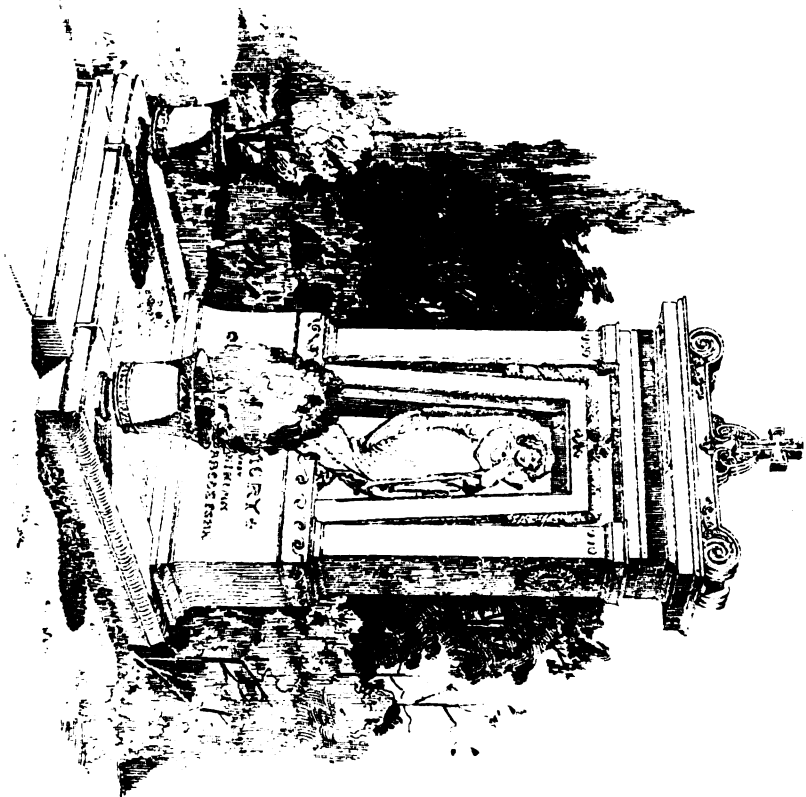
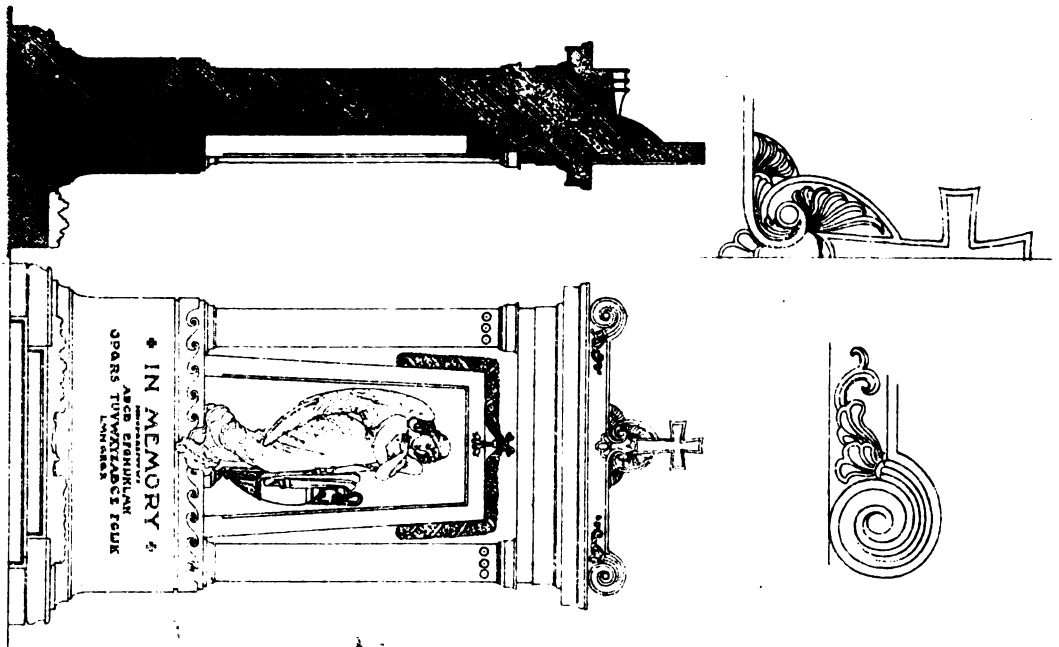


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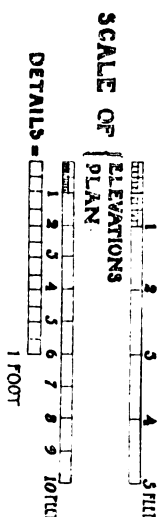
ILLUSTRATION BY J. B. BARTON





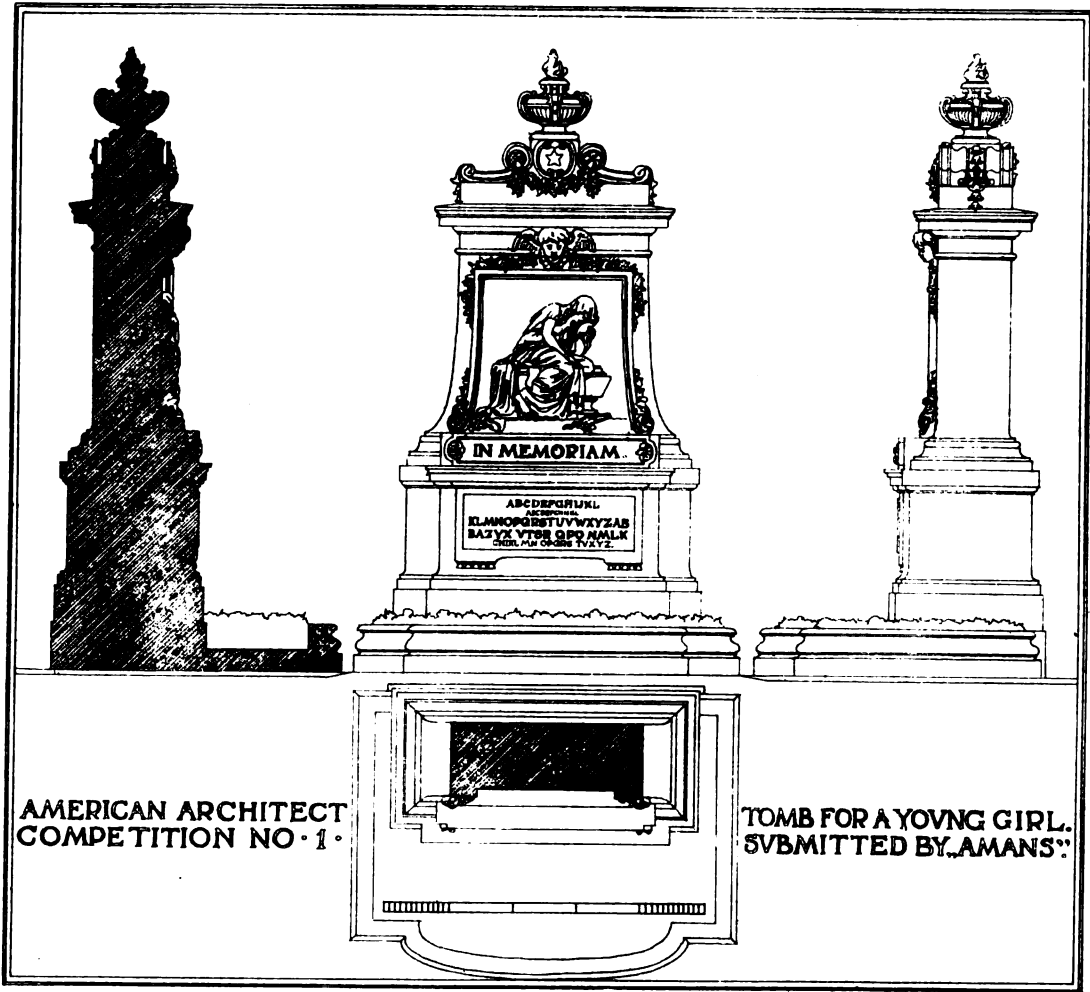
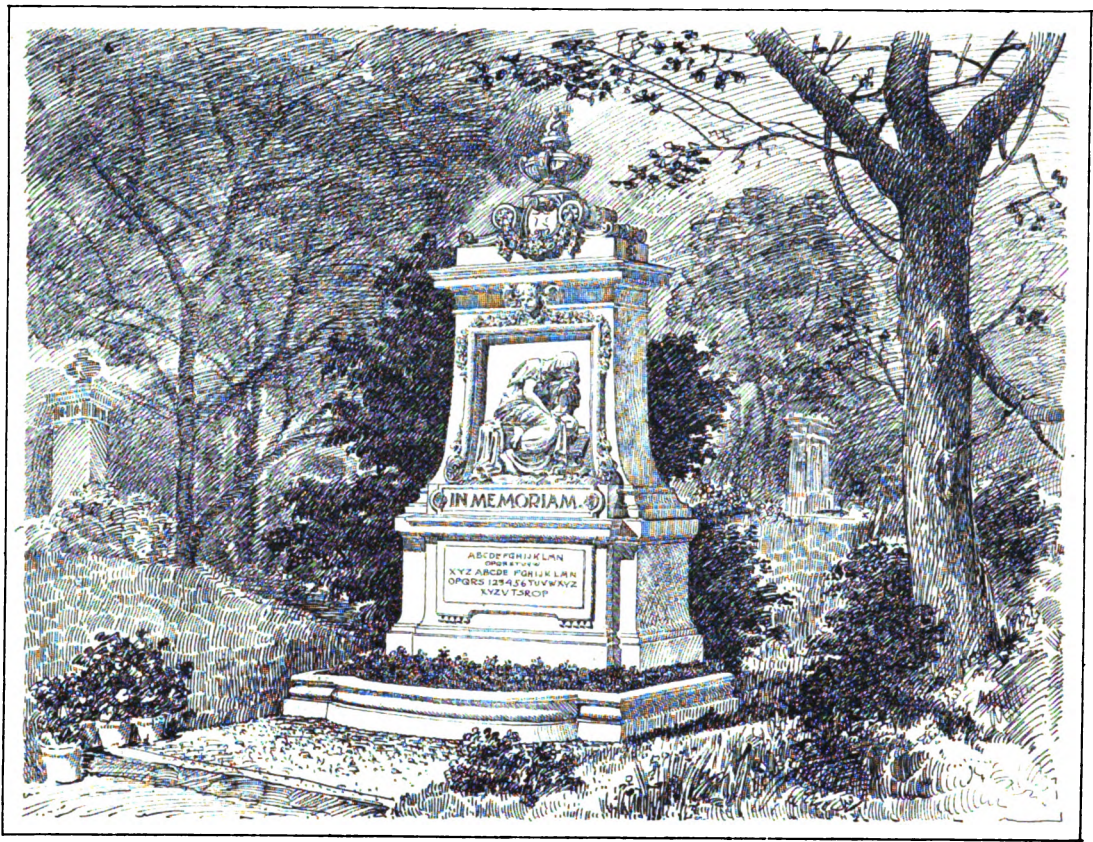


AMERICAN ARCHITECT COMPETITION NO. 1.  
DESIGN FOR A MONUMENT TO A YOUNG GIRL.  
SUBMITTED BY "ONIS".





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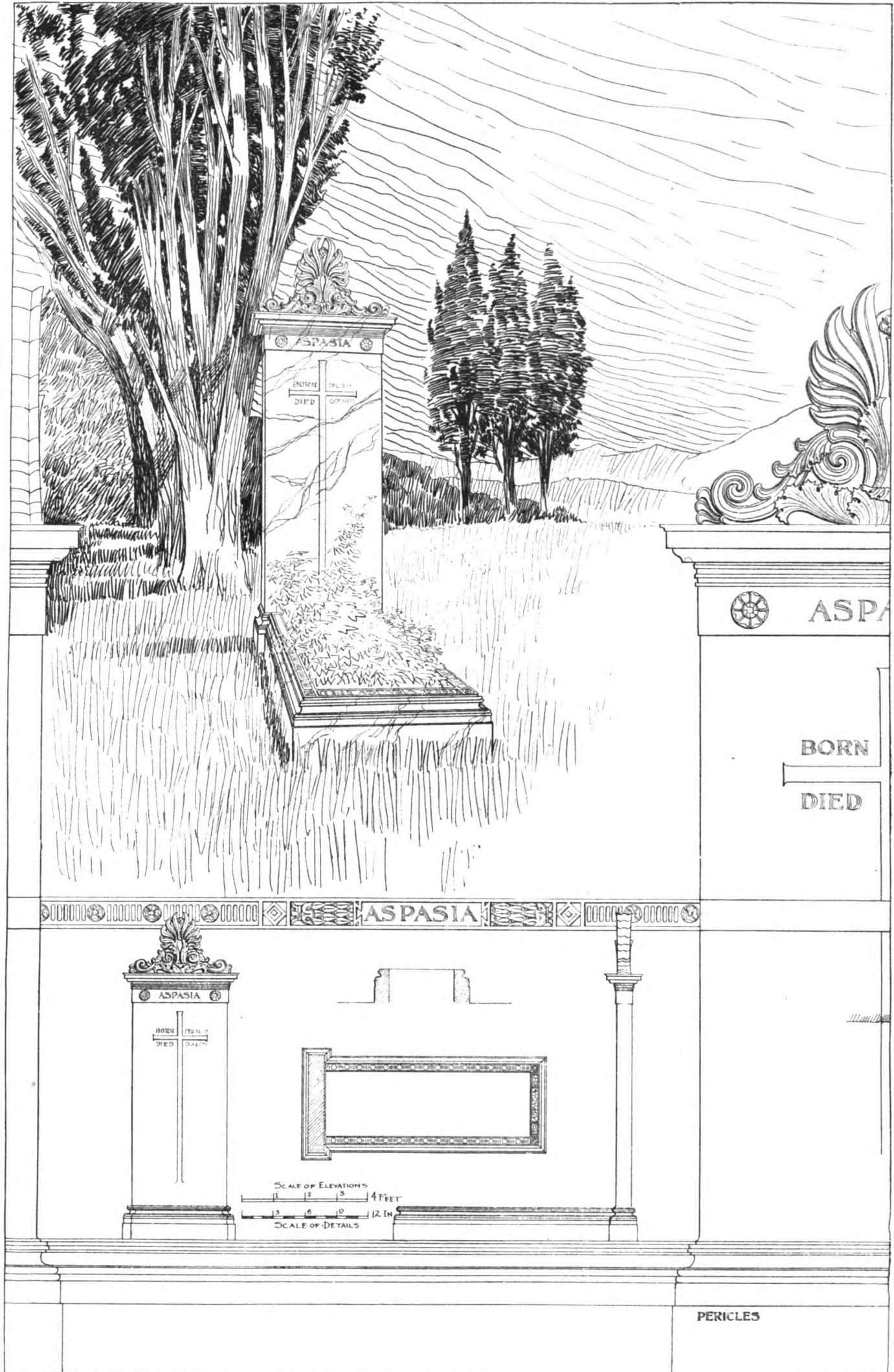


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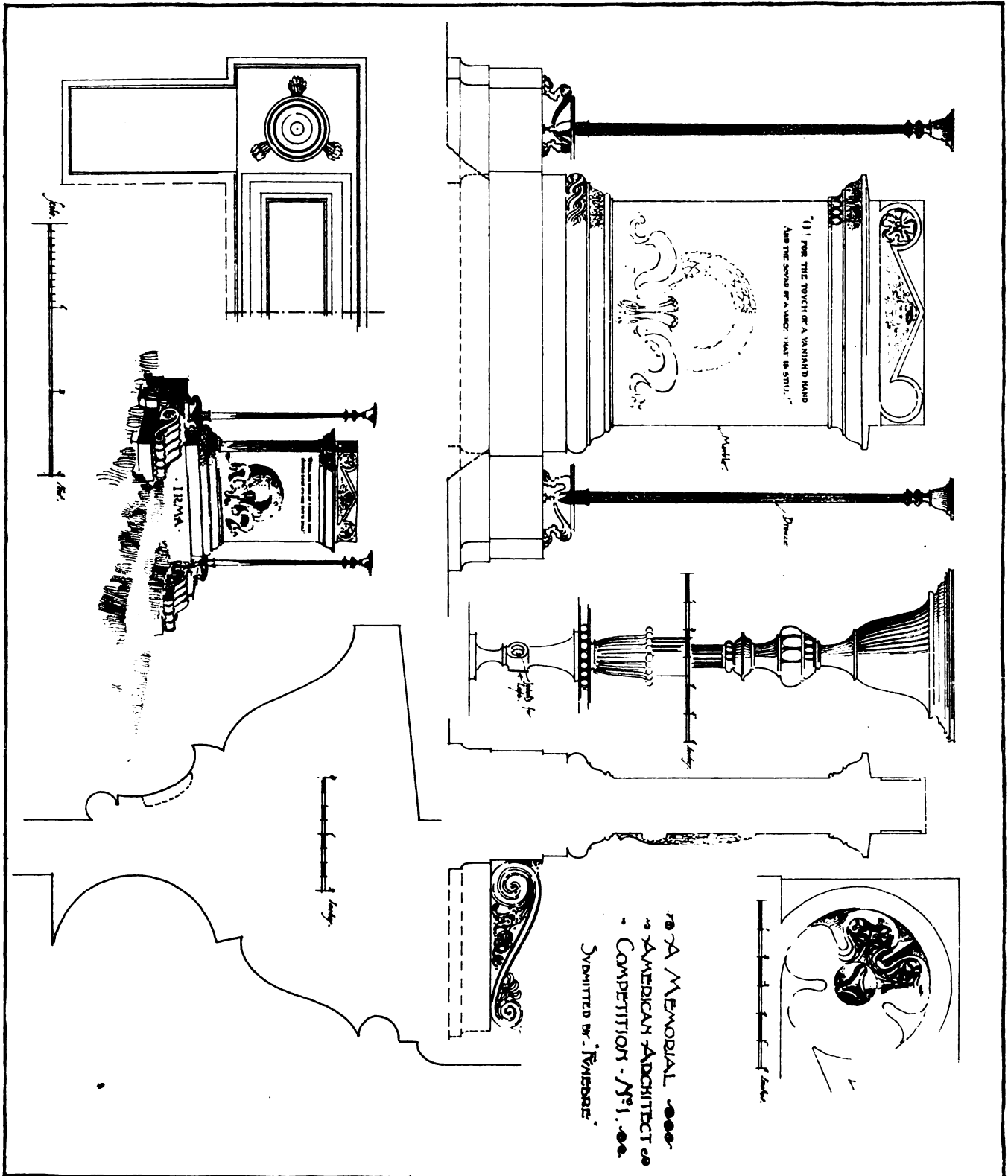
TOMB FOR A YOUNG GIRL.  
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ELLIOTT & FRYDENBERG CO., BOSTON









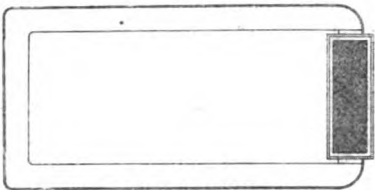




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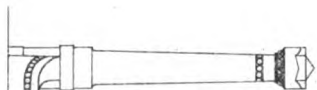
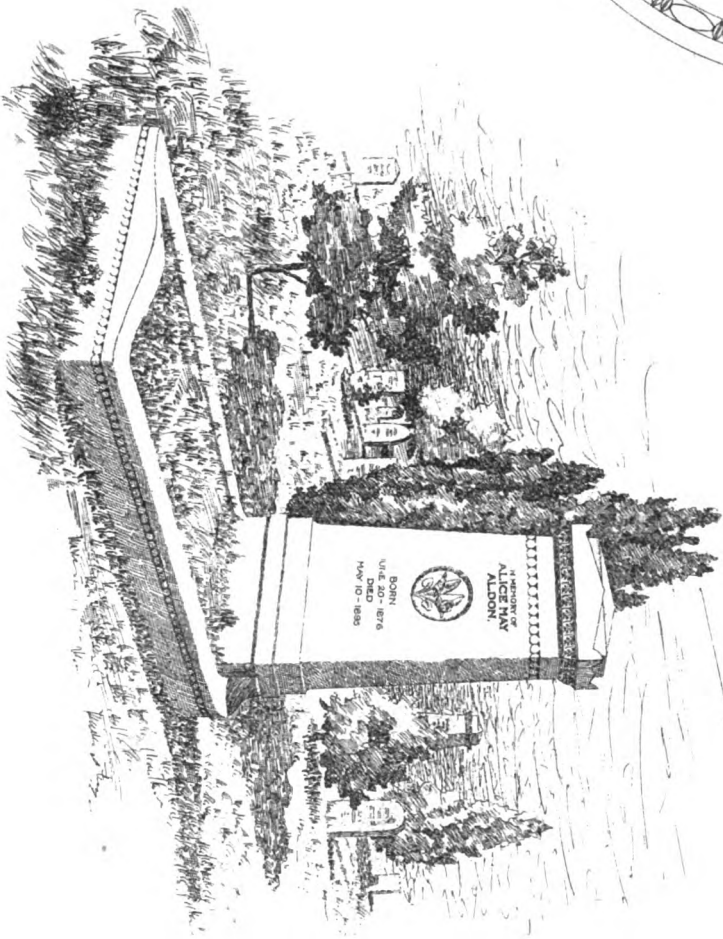
DETAIL OF MEDALLION.  
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PLAN.



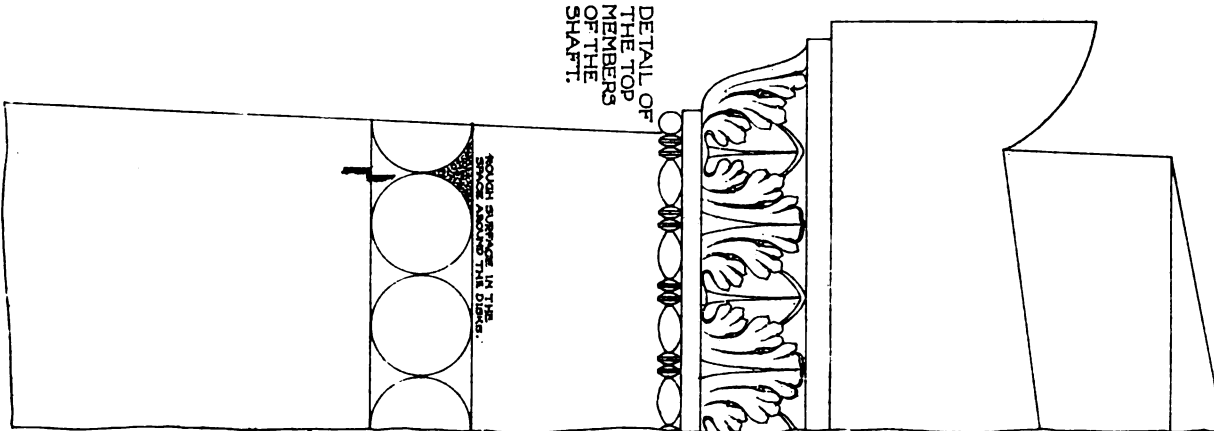
FRONT ELEVATION.



SIDE ELEVATION.



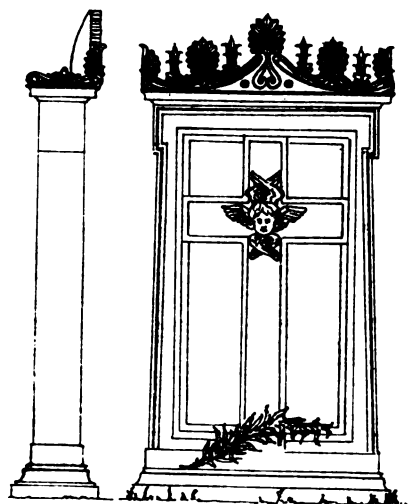
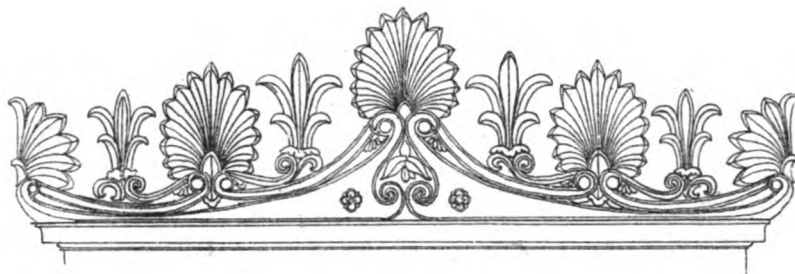
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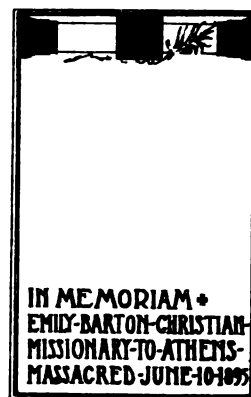
DETAIL OF  
THE TOP  
MEMBERS  
OF THE  
SHAFT.

SPACE BETWEEN THE DIALS.





PLAN AND SECTION



IN MEMORIAM •  
EMILY BARTON CHRISTIAN  
MISSIONARY TO ATHENS •  
MASSACRED JUNE 10 1879

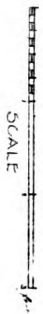
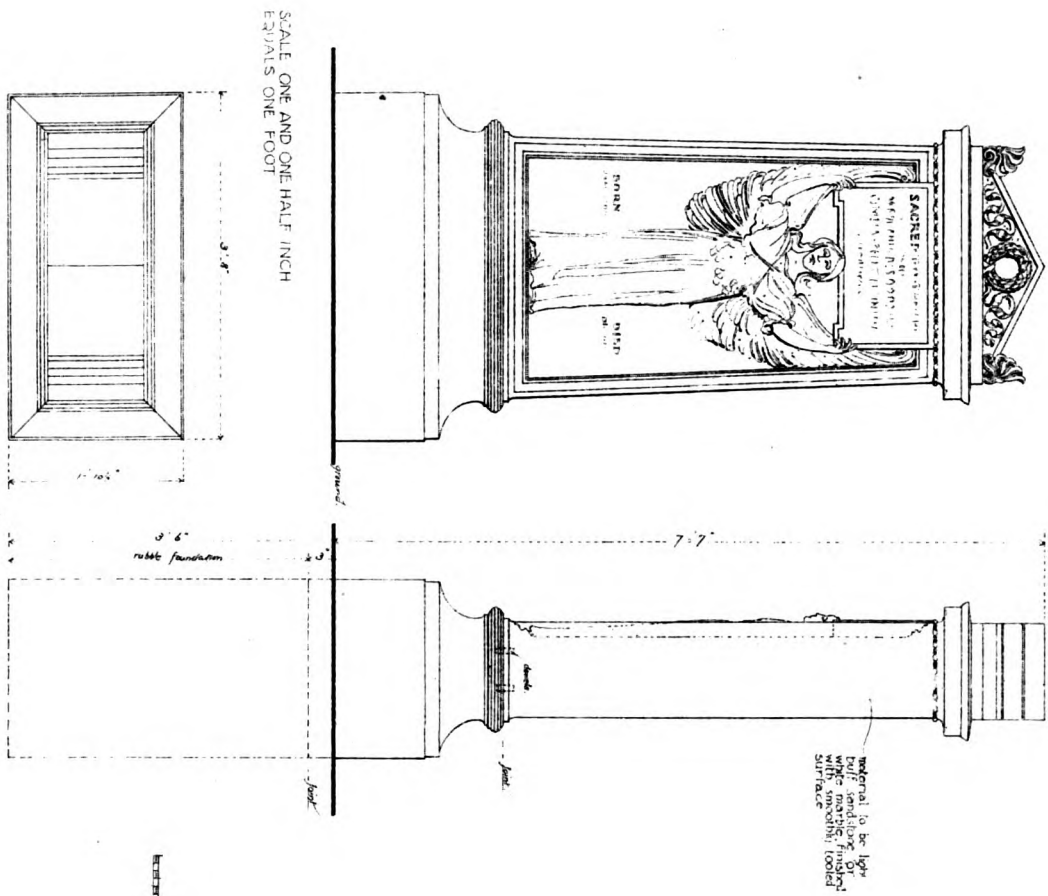


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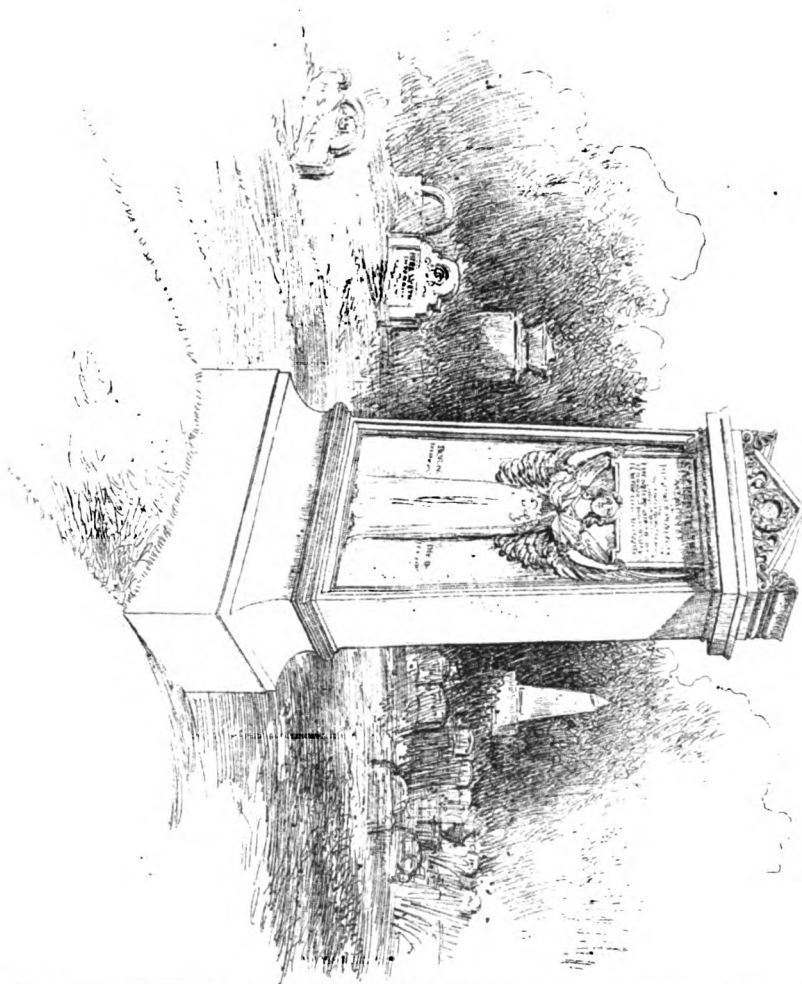
A MEMORIAL TO A YOUNG LADY SUBMITTED BY  
*Her Brother*







THE AMERICAN ARCHITECT INTER-SKETCH CLUB  
COMPETITION - A MEMORIAL TO COST \$5000<sup>00</sup>  
SUBMITTED BY PAX





Many people think the craft is a very limited one. This is not so: there are quite a number of wood-carvers who for want of constant employment drift into other occupations, and who only turn up when there is a big job going, or a spurt in trade; and it is surprising to note the falling off in aptitude this change or enforced idleness causes, for a carver needs unlimited practice to be smart at his work. To my mind there are few occupations where the work shows so quickly a want of knowledge, carelessness or indifference on the part of the worker. If a carver has no energy or "go" in him, his work shows it. Constant application and studying the old examples give one great facility, and enable the carver to appreciate promptly anything that may be placed before him to carve.

I have known some very clever carvers indeed, who did beautiful work in a style of carving congenial to their fancy, but floundered painfully when knowledge of the character of other styles was required. I early saw that cleverness of this sort did not bring much grit to the carver, and determined to remedy in my own case what I considered a failing on the part of others; and this resolution was confirmed after a brief spell of trying to live as an artist, for such in my youthful enthusiasm I conceived myself to be. I carved birds, flowers, miniature figures and many pretty things besides, and although greatly admired, nobody wanted to buy them. About this time I happened to be looking through a volume of poems by Austin Dobson, and came across one entitled "The Caliph and the 'Carver.'" Reluctantly I took the Caliph's advice, blossoming eventually into an employer, I suppose in consequence.

As a matter of fact, my attention was directed by force of circumstances to another view of the subject, and, making a fresh start, I began by visiting the different cathedrals and churches remarkable for their carvings, noted the styles and peculiarities of each, and quickly observed that the old carvers worked with a thorough knowledge of the effects produced by a quantity of simple carvings added together. This is more particularly observable in late fifteenth-century work, the chopppiness of which has influenced me no doubt in my development, for I very much admired the *gee* in this style of carving, and the apparent fact that the carvers knew when they had done enough to their work, for one rarely comes across a specimen of the period that seems to have had an hour's time too much spent upon it. I have frequently the greatest difficulty in impressing upon assistants that good carving does not consist entirely of very clean cutting, or making their work look like "carton-pierre." This applies, of course, to architectural carvings. All the same, I can thoroughly appreciate and enjoy a beautiful or highly-finished piece of wood-carving as a specimen of craft work only, for one recognizes the enthusiasm of the worker and what close application the work has involved.

Before finishing this brief paper I should like to say a few words on a matter that comes under my cognizance as a wood-carver. I refer to the mistaken notion prevalent among pupils of the wood-carving schools so popular now, that by their attendance at these schools they are learning a profitable trade, because, from a wood-carver's view, the very elementary instruction given is only sufficient to enable people with leisure to while away their time pleasantly. But when young men come to me seeking employment, saying they have had several months' lessons at a school, and are willing to accept from £2 to £3 a week wages for a beginning, I cannot help feeling they have been misled and their time wasted. One young man, whose name need not be mentioned, told me he had had six years' tuition at a school of wood-carving, and besides taking money prizes had won a gold medal for his work. Thinking one might be helping a future Sir Francis Chantry, I gave him employment and encouraged him in his work. Very shortly, however, he told his fellow-workers that he "wasn't in it," that my shop was a revelation to him, and, on realizing his position as a competitor for a living with ordinary carvers, he threw up the sponge and enlisted for a soldier. A proper apprenticeship in a wood-carver's shop, in my experience, is only just sufficient to qualify a young man to get £2 a week wages, and then to hold his own he must ever be on the alert for self-improvement. There is a wide field for improvement open to the ordinary wood-carver, whose necessities induce him to obtain employment, however incompetent he may be for the class of work in progress.

Pondering over the subject — and I offer the suggestion — one cannot help feeling what a lasting good might be done for the present and rising generations of wood-carvers, if a learned body like the Royal Institute of British Architects could see their way to giving free lectures on the various styles and characteristics of wood-carving to members of the craft. Lantern views of photographs of the best examples at different periods, with an intelligent explanation of each style and its peculiarities, would be of very great advantage to craftsmen, as there are no technical schools, I believe, which teach on these lines. At actual wood-cutting they are already proficient. I would also venture to suggest that these lectures should be printed, and sent out to be given before every architectural society in the kingdom, and the same course repeated every succeeding winter.

One of the city companies has taken a step in the right direction in offering prizes, both to apprentices and adults, for specimens of wood-carving; and this is a very good thing in its way, but the lack of definition robs the good intention of much of its value. It would be much better, in my opinion, from an educational point-of-view, to specify a recognized style than a go-as-you-please, nonde-

script production. For there is no carver of whom I have ever heard who is capable of evolving a new style; and to attempt to carry out a job on feeble invention, a conglomeration, in fact, resulting from his own experiences, which can rarely be satisfactory, is but to court failure. Neither is the result, when the work is carved to the architect's full-size drawings, bound to give satisfaction; for often the carver, in his anxiety to faithfully and correctly interpret the designs supplied him, loses his freedom, and the work, in consequence, is generally hard and unsympathetic.

The following are a few examples with which a wood-carver should be familiar, and will doubtless satisfy you that I have not taken a pessimistic view of the subject in regard to schools of carving:

Norman Zigzag. — Example: Rochester Cathedral. Early English of eleventh and twelfth centuries. — Example: Choir, Westminster Abbey. Decorated, thirteenth and fourteenth centuries. — Examples: Lady Chapel, Ely, and Choir, York Minster. Perpendicular, fourteenth to fifteenth century. — Example: King's College, Cambridge. Tudor, 1550 to 1600, a rude style of Perpendicular. — Example: Thornbury Castle, Gloucestershire. Jacobean, 1600 to 1650, a medley of Classic and Gothic. — Example: Longleat House, Wilts.

The five Orders as a matter of course; The Italian and the French Renaissance; Dutch and Flemish Ornament; French and German Gothic.

A knowledge of the Apostles, saints and prophets, the Evangelists and their emblems, will be useful to the carver; also of the Greek and Latin Fathers, the Cherubim and Seraphim that "continually do cry." He must study anatomy and botany, must know something of heraldry, etc., and be able to carve at short notice any animal that lives "in the heavens above, or in the earth beneath, or in the waters under the earth."



THE ONTARIO ASSOCIATION OF ARCHITECTS AND REGISTRATION. — THE TORONTO COURT-HOUSE MUDDLE. — DAY VS. CONTRACT WORK. — THE ENGINEER'S REPORT ON THE TORONTO WATER-SUPPLY.

THE progress towards satisfactory legislation in connection with the Ontario Association of Architects in the Provincial Parliament must necessarily be watched with considerable interest by the profession all over the world. Many have, no doubt, thought that because they did not hear anything on the subject the matter was in abeyance, if not abandoned; but any one who has had experience in such matters knows that reforms of the kind are often only attained after years of patient waiting and steady persistent work on the part of the promoters. The Ontario Association of Architects is not dead; indeed, it is very much alive, and the attainment of the required legislation is nearer than ever before, and the grounds for hope of ultimate success within the very near future are more substantial than ever. The Association is now five years old; it was organized for the express objects of education and the recognition by law of the profession: not that it should be made what is termed a "close profession," but that the public might be protected from the danger of the employment of unqualified men. It will be remembered that a bill was passed by the Ontario Government, but every advantage of the bill, the pith and essence of its usefulness was annulled through the insertion by the legislators of the word "registered." The bill thus provided that no one should have the right to call himself a "registered architect," unless he were duly qualified according to rules laid down in other clauses, but any one, of course, was at liberty to call himself an "architect" and to practise as such, whether capable or not of carrying out the works committed to him. Since then it has been the determined effort of the Association to get this word removed. The difficulty lay principally in the misunderstanding of the object of the measure; at one session, when the bill should have been introduced, it was found that milk-dealers and undertakers were applying to the Legislature for acts of incorporation for the sole purpose of keeping up prices and excluding all from selling either milk or coffins who did not become members of either association. The temper of the House was such that had the architects' bill been introduced, it would have been looked on as a similar attempt at class legislation for the benefit of the pockets of the few, and the bill was consequently withdrawn. Since then nearly two years have elapsed and public opinion all over the world has been awakened to the fact that there is a decided danger in not having architects properly educated in the first place, and then in there being no means of telling the qualified from the unqualified. The bill at present under consideration (at the present moment it has passed its first reading) has been modified in certain clauses, but not so as to alter its main provision, and as it stands

now, no one of intelligence can possibly have any objection to it. The profession in Ontario look forward very hopefully to its passing at this session and coming into force within, at most, a few weeks. It will be well to quote a few sentences from the address of the President of the Ontario Association of Architects at the Annual Convention, which took place in January last in Toronto. "Practically all we ask for is, that the Government shall take some steps to assist us in raising the standard of education which it will be necessary for persons to possess who in future desire to assume the title of 'architect.' . . . It has resolved itself into an educational matter, pure and simple, and not, as it was at one time feared by some people, a sort of scheme by which we could make the practice of architecture what is called a 'close profession.' The act does not preclude any one, either now or in the future, from carrying on, as at present, the whole business of an architect. A man will be able to make plans and sell them, design houses and build them, or do anything he wishes in the way of ordinary architectural practice. He may charge for his services exactly as he does now . . . he will have the same facilities for collecting these fees (in the courts, if necessary) as he at present enjoys, the only difference being that he will not be able to take or use the title 'architect' in any way or shape whatever. He may call himself by any other name he chooses . . . but from the use of the word 'architect' he will be debarred entirely, and this only because he so elects. There is no hindrance placed in his way should he desire to enroll himself in our ranks. . . . If . . . he wishes to use the more honorable title, all he has to do (if he be practising at the time the act goes into force) is to send in his name and register as a member of the Association. . . . The Act says 'any person now practising the profession of architecture within this Province may become a member of the Association by causing his name to be registered with the Registrar of the Association within three months of the coming into force of this Act, and by paying to the Registrar such fee as may be made payable in that behalf, subject to the proviso hereinafter contained.' . . . Certainly, no one can say that any difficulties are created. . . . No difficulty will, however, arise from this source, for I am proud to say that our Association practically numbers among its members every person following the profession of architecture in the Province of Ontario. . . . It must not be forgotten that the present benefits (should the Bill pass) will be small, so small, indeed, as to appear almost insignificant. It is to the future we must look, if we wish to see the results we hope for. . . . We will have only the consciousness, and it will be a very pleasant consciousness, that at last we belong to a profession which has some real and proper standing of its own, and that it lies with us to see, that in the time to come, when the public find a man calling himself an architect, they may know that he belongs to an honorable and recognized profession, and that he has acquired the right to wear the title by education. . . . It is the students of to-day and the public of the future who will reap the fruit of our labors. Certainly, we who are moving in the matter can be held guiltless of self-seeking, for of any actual personal immediate advantages there are none."

In concluding his address the President made some excellent remarks about "ethics" in connection with architects' fees. "I cannot, for the life of me, see why there is all this growling and grumbling about other men's fees. A great deal more practice of ethics and much less talk would be better for all of us. If one man chooses to charge his clients three per cent . . . why on earth should any one complain? The men in question evidently think that that is what their respective work is worth. They are the best judges of its value and in that respect they are honest. I do not see indeed, why a man should not if he see fit, advertise that he is a three-per-cent architect, or a two-and-a-half-per-cent man, or a four-per-cent man, or anything else he thinks his work is worth; . . . it is his own business, why should anybody mind; that is, so long and only so long as he charges everybody the same. But the individual the Association ought to mind and ought to frown down in the severest manner possible, and moreover punish, if a way can be found, is the man who adopts a sliding scale of fees for the same class of work. . . . It is the man who for the same class of work varies his charges, who gets out of one man five per cent because he is a decent sort of fellow; out of another three per cent, because he is a hard-fisted chap who always drives a close bargain; out of another two-and-a-half per cent, because if he charges more some one else will get the work, who is guilty of the grossest form of unprofessional conduct."

The "Court-house Muddle," as it is appropriately termed, in referring to the mess that has been made over the Toronto Court-house and Municipal Building, has reached another stage — shortage of funds. The architect of this building, it will be remembered, took the work out of the hands of the contractor, and as the tenders submitted for the completion of the work were all too high, he decided to complete it by day's work, feeling sure it could be done more cheaply and with equal efficiency. We have alluded to this case as one that would be worth watching, as a proof, one way or the other, in favor or otherwise of day's work over contracts. There have been many cases, involving small amounts, comparatively, of money where day's work has been tried in preference to contract work and most of these have shown that the result has been in favor of contracts. Here was a case involving something like a million or so of dollars; and we are just reaching a point where we can begin to learn our lesson. It has been found that the necessary sum provided for the completion of the works comes short of the actual requirements by some \$250,000. So we learn that in this case day's

work has proved a grave mistake. It was suggested that some portions of the work should be left for the future and that the building should be made ready for occupancy at as small a cost as possible. The lofty tower on the front elevation was to be omitted. But the architect reports that this is impossible, because orders for the stone have already been given and the tower is an absolute necessity, as it forms an important factor in the scheme of ventilation; to leave out the tower, the ventilation works already completed would have to be changed and that would increase rather than diminish the cost. Legislation will have to be asked for to provide this amount, as it has been decided not to submit it to a vote of the people.

The eminent English engineer who was called in to report on the water system of the City of Toronto, has at last submitted his report, such a report as few of the corporation expected to receive — so complete, exhaustive and masterly a document, that the grumblers who thought his fees excessive, have at least learned that they have got something for their money. It practically settles the question forever, points out the fallacy of some schemes, endorses the proposals of the City Engineer, goes into the whole subject of supply and consumption, and provides a book of reference that will have immense value on the matter for as long a time as the city exists. There is no question that it was a wise move when it was decided to call in his services. We have now complete analyses of the water from all available sources, directions for treating such water where filtration is desirable, methods suggested for bringing the water to the city, with a thorough examination of each, in which are pointed out the advantages or disadvantages. Costs of every plan are fully gone into, the future is looked to as much as the present, and, in short, it would I think be difficult to suggest a single point that has not been touched upon in the fullest possible manner.

As I am closing my letter, I notice a paragraph in the daily paper which states that the Architect's Bill has passed its second reading and has been referred to a select committee of ten members. Despite all that has been said in the House with reference to this Bill and its objects, at the last moment of the second reading, a member persisted in denouncing it as an effort to make the Ontario architects into a close corporation. It is strange how very thick some skulls are and how obstinate an ignorant person can be on the subjects he is most ignorant of.



A MUD SNOW-STORM. — MR. COBB TO BE ARCHITECT OF THE GOVERNMENT BUILDING. — REBUILDING OF THE COLLAPSED "COLISEUM." — THE CUT-STONE STRIKE. — SETTLEMENT OF OTHER LABOR TROUBLES. — GOTHIC DETAIL IN A OFFICE-BUILDING. — ATTEMPTS IN VARIOUS COLORED TERRA-COTTAS. — THE ELEVATED RAILROADS. — A NEW STUDIO BUILDING. — EXHIBITIONS.

IT seems as if this year winter, with more even than its usual persistence, stayed "in our midst." March came in like a lion, and has been disporting itself after the manner of this king of beasts ever since. It is a curious fact that with the spring weather, and not, in many cases, till that arrives, do many people turn their thoughts to building operations. Dull times to start with, and a lingering winter keep away from the architect's office much of the activity in smaller building enterprises that might come with the warmer days. It is hard to realize that milder days ever will be here, when one snow-storm is following another in quick succession. During this last month Chicago and its vicinity suffered from a snow-storm of such an unusual character, as to be the subject of general comment. What looked like not a very severe storm began late one afternoon, accompanied by a very high wind from the southwest. By eight o'clock the wind had become so laden with dirt and sand from somewhere, that the snow came down in the form of mud, a very unpleasant shower to be out in, and by the next morning the snow itself presented a most woe-begone appearance. Much speculation has been devoted to this curious phenomenon, with but small satisfactory results, but one of the most curious calculations was that made by the pupils of the city Normal School: having taken a certain area of the snow which fell, the pupils precipitated the solids in it and found that in one square rod of surface there was 2.53 pounds of dust or 2,560 tons to the square mile. These figures multiplied by the area of Chicago's square miles, or 175, gave a total of 448,000 tons, or a pile 142 feet long by 90 high, and 60 feet wide, or enough to fill in the Lake Front.

The great event during the last month in architectural circles here has been the appointment of Mr. Henry Ives Cobb to the position of architect for the new Federal Building, about to be erected in Chicago. Mr. Cobb's chief opponent has been Mr. Coolidge, of Shepley, Rutan & Coolidge, whose weakest point as a prospective candidate seemed to lie in the fact that he was not actually a Chicago man, but a Boston architect temporarily residing here, whose sympathies and chief interests were, however, all with his New England home. There is a general feeling that the chances



of a successful building will be as great with Mr. Cobb as with any one, and the appointment seems to meet with approval. A part of the letter of appointment reads as follows: "Under and by virtue of the authority conferred upon the Secretary of the Treasury by joint resolution of Congress, approved January 28, 1896, you are hereby employed at the City of Washington, as a skilled architect to assist the Supervising Architect of the Treasury in preparing the designs, plans and specifications and other drawings for the public building at Chicago, Ill., and for the architectural supervision of its construction with compensation at the rate of \$4,200 per annum and necessary travelling expenses, while engaged in the performance of said services, the same to be paid out of the sum authorized to be used in the said resolution."

This appointment of a local architect to assist the governmental Supervising Architect means much more than a matter of mere local interest to Chicago. It means that in the future the best architectural talent of the State or city may be employed for all Federal Buildings erected in such district, rather than that they should be placed in the hands of possibly incompetent men filling the post of Supervising Architect, and wholly unacquainted at all times with the building conditions of the place where the structure is to be built, or the special needs of the community which is to use it. This much-needed reform in the methods of construction of Government work is, as most architects know, a direct outcome of the vote for a favorable report by the House Committee on Public Buildings and Grounds, on the Aldrich Bill, a bill similar to the one known as the McKaig Bill of last session. This already well-known bill does away practically with the present system followed in the erection of public buildings under which the work of design is done exclusively in the office of the Supervising Architect.

In spite of cold weather and snow, above alluded to, we are liable at any time, in a warm day, to have a reminder that June and the Democratic Convention are not far away. The building destined for its use is that known as the Coliseum, which about a year ago collapsed so opportunely, — at about the only hour of the twenty-four when it was not filled with human beings. The building itself simply went to pieces, only the name of the former structure remaining. Work on this new building up to within a few days was being pushed forward with all speed, and the great trusses and powerful derricks brought to one's mind the old days in this quarter previous to the Fair, when all was astir with work and preparation. Eleven of the twelve great trusses are already in place, much of the cut-stone work has been laid and all is on the ground, the brickwork is well under way, and the whole building could easily have been finished by the fifteenth of May. The cut-stone, however, unfortunately came from the yard of the Henry Furst Company, against whom the hottest part of the stone-cutters' strike, spoken of in last month's letter, is being waged. This stone will all have to be paid for and the Furst Company would suffer in no way from a general strike on the Coliseum Building, or the entire throwing-out of this stone. Nevertheless, within the last few days a strike has been declared "on" by the unions, and the iron-workers, masons and carpenters have been called off. The brick-masons have an agreement with the Contractors' Association which prevents them from striking without first submitting the trouble to the joint Board of Arbitration.

Owing to the disagreeable position in which the contractors of the Coliseum are placed, they are willing to offer and promise anything within reason, even to discarding the non-union stone, or substituting brick-masonry for all the stonework. At present writing it is hoped the strike will be settled within a few days. At one time it looked as if a division in the Stone-cutters' Union itself might lead to a more speedy settlement. At the present date, [March 19] the union men have decided to hold a special meeting, at which a committee of six, including the president of the union, is to meet with similar representatives from the Cut-stone Contractors' Association. These committees with possibly an umpire will meet on the following day. They will be given power to act and their decisions will be final. Work, as a result of the decision to arbitrate, will now be resumed on the Coliseum and the following agreement has been signed by officers of the firms and unions concerned.

"The Chicago Exhibition Company and the Probst Construction Company hereby agree to immediately stop the cut-stone work above the water-table of the vestibule of the Coliseum Building and to remove said cut-stone work from the building within ten days from this date, March 18, 1896; provided the committee representing the Building Trades Council demand in writing that the said cut-stone work shall be removed from said building in the event that arbitration does not settle matters satisfactorily; and, provided further, that the strike now called in the Coliseum Building be declared 'off' and work resumed by the various trade organizations involved, to-morrow morning." Here follow the signatures and the statement, "We hereby agree to stop all cut-stone work in our yard pending arbitration" — signed by Henry Furst & Company.

Thus the matter stands at present and time alone will decide how the matter shall be settled. That the Coliseum must be finished at its appointed date goes without saying, whatever may be the outcome of the strike.

Discouraging as this present strike is, as an example of high-handed tyranny, the summary of labor news of our city for the last few months has some more hopeful features. During this time the

differences of at least six trades have been settled between the unions and the bosses without first resorting to that most harmful and cruel of all expedients, a strike. To strike first and then arbitrate seems about as rational as it would be to first lynch a man and then grant him a judicial trial, and that six differences between employer and employed have been settled rationally by arbitration within a few months is a hopeful sign for the future. The brick-layers, carpenters, painters, steam-fitters, brick-makers and printers have, by means of committees from their unions meeting committees from their employers, determined the method and manner of work for the coming year, as well as the scale of wages. And all this has been so quietly settled that the great mass of people have had no idea that there was any possibility of a strike.

Several of the down-town buildings, which have been spoken of before in these letters as being in the process of construction, are now nearing completion, and, their scaffolding and sheathing being removed, one can at last judge somewhat of their façades. As a rebound from the severe plainness of the Monadnock and several of its contemporaries, at least one architectural firm has plunged into the intricacies of the Gothic. One structure known as the Fisher Building presents twenty or twenty-one stories of perfect and complete unrest. This is the building mentioned in last month's letter whose iron frame had been erected with such surprising rapidity. Between the tops of the windows of each story and the sill-course of the story above, is one continuous line of panels filled with intricate Gothic work. Though certainly the design is more entertaining, if one may be pardoned the expression, than those of the wooden-box style, still it is questionable how the wealth of ornamentation will stand the smoky atmosphere, or more properly it is hardly questionable at all. In the Fisher Building, little fishers on dolphins sport around the entrance. A good design of grape and leaf ornament, the corbels and, as said above, panels fill every available space, till the weary eye at last rests upon what looks from the pavement below like eagles perched under and bearing up the final cornice, almost among the clouds. It is a very difficult question to decide just how far an office-building should offer itself to architectural ornamentation. Than the box style, nothing could be worse, but in this adaptation of the old Gothic to the modern needs one very serious defect is felt. In the old buildings apparent richness of design was, on close inspection, found to be a real thing. Every bit of carving was studied in itself, and the impress of the individual was left on each piece of work, while one spirit pervaded the whole. To-day in this building a fair design is made for the panels under the windows, and in this case the terra-cotta carver is told to make a thousand, more or less, just such panels. Of course, for so large a structure the work of designing something absolutely true to the old Gothic spirit would be indeed a colossal undertaking, and whereas in the erection of the old cathedrals years and years were consumed, here if two years are allowed for design and construction, a fairly large allowance of time has been granted. The old "lace-work" of the Gothic buildings has become the easily duplicated, quickly wrought, in many places effective, machine-lace of the present day. It is, of course, a much discussed question which well-known style can most naturally adapt itself to the requirements of the modern office-building. This modernized Gothic is not without its charm, but it hardly brooks the lazy treatment which it is given in some of these large buildings.

The southern façade of the annex to the Great Northern is now exposed to the public gaze, freed from scaffolding and similar encumbrances. It is of white terra-cotta, and with its manifold ornamentation can scarcely help falling an easy prey to Chicago's smoke and dust. Not as high a building as the Fisher, it requires less multiplying of the designs and gives the impression of less monotony of repetition.

A most charming adaptation of fifteenth-century Gothic to the requirements of modern life is found in a private residence, of several years' standing, on the north side, the work of the late Richard M. Hunt. Every detail is as true to the spirit of the style it represents as possible, and the excellence of the designs are only equalled by the excellence of their execution. Of course, the problems to solve in connection with a residence would be the simplest, while those connected with a twenty-storied business block would be some of the most complicated of modern times. In the Fisher Building every available space of the outside walls has been used for windows, so that in the matter of light there has been no wasted opportunities, and no sacrifice has been made on this score to Gothic ornamentation and pointed arches. This reasonable adaptation of a style is as it should be, and the features to be sacrificed are those which take from the comfort and fitness of the structure. The individuality of architectural detail would in no way lessen the adaptability of the structure to the needs of modern life, excepting as the modern purse would be affected by it, and consequently, as such individuality is the very essence of the Gothic spirit, the style would seem inappropriate for modern adaptation if too expensive to be well designed and carried out.

A very curious sight in another down-town building is found in a comparatively small building on Washington Street, the Lincoln. The façade is of white terra-cotta, which has the appearance of having small dabs of brown paint peppered over its surface. The terra-cotta for the lower stories is, between the larger openings, in the form of pilasters bearing Renaissance capitals. This terra-cotta is glazed green, with most inartistic splashes of yellow or gold over it, while the capitals are very polychromatic. Terra-cotta for

several additional stories was finished in this same polychromatic manner; but the experiment was so ghastly, the public fortunately was spared even a sight of it. The whole building bespeaks a Classic temperament, except where it breaks forth from restraint and comes out simple unaffected American. After the first stories, with their startling combination of form and color, this straight American style has a chance to display itself for six or eight stories, and finally a Greek temple, columned and pedimented, rises from the utilitarian rows of bays.

This seems to be the final development in the attempt to obtain something original in the matter of coloring, a movement which was inaugurated by the glazed cream-white terra-cotta of the Reliance Building, and the white terra-cotta and buff brick of the Old Colony. The terra-cotta of the Fisher Building, above spoken of, is in a warm buff tone, the same material in the Great Northern annex appears in as nearly a dead-white as could be obtained, and now comes this motly-colored Lincoln Building, showing as little feeling for art as did the good man whose name it bears, but holding much less firmly to all fixed principles and standards than was always his wont. If this sort of thing increases, we shall bless the bedimmed smoke of our town and shall be happy that a veil can be dropped over certain objects.

In spite of the fact that the South Side Elevated Road is not paying expenses, the Northwestern Elevated is being pushed through with all energy, and in less than a year from this date trains will be running. It certainly will afford a means of rapid and comfortable transit to a large tract of country which heretofore has been dependent on the cable and electric lines. It is planned that the present electric lines running in from the nearest suburbs on the North Shore shall not only connect with the trains on the elevated, but connecting by means of a system of grading will reach the level of the elevated stations, and then be attached to the elevated trains themselves, thus avoiding for the passengers the climbing of long flights of stairs and the changing from one car to another.

Without doubt, the road will open up a large tract of desirable residence property heretofore not available to the average citizen, because of its distance from town. It is the general policy of the road to buy whatever stands in its way. A four-story flat building has recently been moved some four or five blocks and, after being put down on new foundations, appears as good as new. This matter of moving buildings is an every-day occurrence here in Chicago, and it hardly strikes us as anything unusual to read in some of our papers that a resident of Kokoma, Ind., having decided to move to Peoria, Ill., intends to take his \$60,000-house with him. In this case the moving will be accomplished piecemeal and not bodily. The house will be taken down, everything carefully marked, loaded on cars, and upon arriving at Peoria will be re-erected, the entire operation being performed at a cost of \$15,000.

The down-town loop of all the elevated roads, before spoken of in these letters, is being pushed forward, so that before long Chicago will have an elevated-road system, which will help solve the question of the transportation of her fast increasing population. Incidentally, this road will open up large tracts of choice residential lots, at present unbuilt on and too far from the centre of the town to be available.

During this last month a little building has been thrown open to the public, which, when first constructed, was prophesied would be a failure, so far as the original use it was intended for was concerned. A two-story structure was built on the North Side on a lot of land running on State Street from Ohio to Ontario, with shops underneath and the entire second story given up to studios. At the northern end still a third story was added, containing additional rooms. The building was well designed, rather English in character, but at first seemed to prove no attraction to the average Chicago artist. The studios remained, many of them, unoccupied and it was felt Chicago was not ready for an embryo Quartier Latin or a centralized bit of Bohemia. However, perhaps with more prosperous times for Chicago artists, or, at least, with better recognition, the studios have filled up, and finally at this reception-day about twenty *ateliers* were thrown open to the public and over a thousand people, some of the artists estimated, were glad to avail themselves of the chance to visit them. Different nationalities here were represented side by side in the different studios, the work in some of them being good enough to express the national characteristic of its creator. Several of our young American artists, especially among the women, showed work of excellent quality, which was needed to offset certain chromesque productions in others of the studios, which at the present day would not be exhibited here in Chicago, except at some private exhibition like this. The general atmosphere was entirely artistic and that so many people visited it is indicative of that growing feeling, or fashion, for art which was spoken of in last month's letter.

The Cosmopolitan Art Club, a local organization, has been holding its Fifth Annual Exhibition at the Art Institute. Some good work is shown, especially among the sculptors, who have done very charming things, though the number of their works is small.

An exhibition of painting which distinctly bears on architecture is that of F. Hopkinson Smith at one of the picture stores. His pictures would be a source of inspiration to the young draughtsman towards work which would be in itself a creation of art. These pictures are in Mr. Smith's well-known style, pencil lines, thin washes, opaque colors—anything that will give the effect. One,

"San Rosario," numbered twenty-eight in the little catalogue, is of especial interest from an architectural point of view. It is simply a sandy-colored sunlit foreground bearing one or two small unimportant figures, with the corner of a Classic building rising against a blue sky, in which suggestions of a sunny distance linger. Nothing could be more simple, or more perfect, either in its composition or in a certain poetic interpretation of a beautiful bit of architecture. For it is architecture pure and simple which he has painted, with no accessories to give an added effect. The scenes are all either in Venice, Holland or Constantinople. The Holland pictures probably appeal most to the general public, but the Constantinople and Venice ones are more strictly architectural. Number 5, entitled the "Mosque Eyoub"; No. 8, "Tomb near Sultan Ahmed Mosque"; No. 13, "The Old Grootekirke, Dort"; No. 15, "Fountain of Sublime Porte," are all very charming, and would inspire any draughtsman with a desire to create works possible of such an interpretation. Number 11, "Beautiful Fountain of Scutari," is almost as charming as the "San Rosario," but in the shape of some trees and distant houses and a bit of human interest in the foreground, is not an architectural fragment so pure and simple as the other. The suggestion in that of the possibilities of a world of sun-lit art and nature around those Classic columns and bit of cornice is most unusual. Even while looking at it one cannot quite understand how or why it is so.

#### NEWPORT MILLIONAIRES' COTTAGES.

"THE cottages are palaces. The cottagers are multi-millionaires. When this is said you expect something glossy, loud and vulgar. So did I. You and I never made a greater mistake in our lives.

Doubtless there is at Newport in the season much show and 'side.' About that I cannot speak, for when I was there the season had just closed, and most of the cottagers had gone. What I testify is that everything that is material and permanent at Newport—that most wonderful of seaside places—is in faultless taste. I have confessed to meeting one or two millionaires on the 'Teutonic' who were pleasant, modest and interesting men. I met one or two millionaires in Wall Street and in Broadway and they pleased me very much.

"All the houses are vast and splendid. I may have been under some glamor, but Mr. Cornelius Vanderbilt's cottage seemed to me to compare favorably with the British Foreign Office, as seen from St. James's Park. The situation of these houses, the distribution, the separation without fencing or walling, give to the whole scene as a great site of mansions an unimaginable spaciousness, with the bay as a glorious outlook. No words of mine can convey an idea or produce credence of this marvellous spectacle of well and graciously and artistically applied wealth—wealth which has harnessed to its aspirations the greatest architectural art of the country. But the best part of the whole story is connected with a right-of-way. All round the edge of the great rounded cliff there is a beautiful well-kept path. The lovely sward comes down to it, and the palaces all stand well back—two hundred yards, perhaps, from the cliff. Observe, there are no fences. There is nothing to prevent you, if you are rude enough, from walking up the lawn and staring into Mr. Lorillard's, or any other cottager's, lordly windows. No one does, but anybody might. Now listen. How is it that these palace-mansions are planned and built in this open and unprotected way? Why are they not brought right down to the cliff edge? Or why are they not shut in from vulgar gaze and trespassing? Well, there was a right-of-way round that cliff which had to be respected. So the 'cottagers' agreed upon a policy. We know what would have happened in this country. The path would have had a grim wall built just inside of it, and the dukes and gentlemen who were going to build the mansions would have instructed their architects to secure for them a maximum of sea-view while taking care that the passing pedestrian public got a minimum of opportunity to see their houses and grounds. Instead of that, these much-abused American millionaires hit on the bold and beautiful idea of building two hundred yards in, and leaving their grounds and lawns absolutely open right down to the public path. The result is such a combination of natural and contrived beauty, open for the enjoyment of all, as is not to be seen on such terms anywhere else in the world. In consideration of the lovely hours I spent in choice companionship walking about that 'right-of-way' path, in view of those perfectly-seen, princely 'cottages,' I forgive the 'cottagers' for being millionaires. If anywhere European aristocrats will behave as sensibly and nicely I will forgive them for being aristocrats."—*Liverpool Evening Post*.

DAMAGE CAUSED BY A MOVING MOUNTAIN.—The lion of the hour is the Gouffre Mountain in the Gard, which is moving towards that river at the pace of five yards a day. Its advance has destroyed the machinery and pits of the Grand Combe Colliery, and destroyed nearly a mile of the Alais Railway. The great thing now is to prepare new channels for the Gard and Gardon Rivers, which are sure, when the landslide comes, to be completely choked up. Six hundred persons have been obliged to leave their homes at the Grand Combe. The lower strata of the Gouffre Mountain, which rises sheer from a valley, are of grit and green marl. Both have given way, owing to the infiltration of rain. Yesterday 5,000 persons went from Nîmes to see the moving mountain from the range fronting it. The noise it keeps on making is frightful. There are wide cracks in all directions. Nobody is suffered to go on the Gouffre or into the valley on which it advances.

—*Paris Correspondence London Daily News*.



## NEW YORK CHAPTER, A. I. A.

A REGULAR meeting was held in the Chapter quarters on Wednesday, March 11, 1896, at 3.30 P. M., President Upjohn in the chair.

The minutes of the last meeting were read and, after an amendment, were accepted.

The following communications were read:

A letter from Mrs. R. M. Hunt, acknowledging the receipt of, and her "deep gratitude" for, the Memorial Minute in honor of her late husband, prepared by a Special Committee and adopted by the Chapter at its meeting of December 11, 1895.

Letter from Mr. Glenn Brown, Secretary Washington Chapter, A. I. A., and Acting Secretary of the newly-formed Public Art League of the United States, asking the signatures of Chapter members in its support. The letter was accompanied by a small pamphlet, embodying the Constitution of the Society, and a list of its members, including its officers and directors. After reading therefrom, the Secretary said he presumed this new art society, among the many now constantly springing up (perhaps too many for the best results), was the outcome of a proposed National Fine-Art Commission, to act as counsel to the Federal Government, which the late Mr. R. M. Hunt had advocated within perhaps the last dozen years; though his recollection was that Mr. Hunt contemplated gaining the end sought for rather by the employment of existing Fine-Art agencies, and especially of the A. I. A. and its Chapters, and such bodies as the New York Academy of Design, than by the formation of a new organization. He thought, however, that the new League should have the sympathy of the Institute, and the professors and connoisseurs of the Fine Arts in America generally.

In the remarks which followed, objection was made that parties contemplating the project of the new society should, before organizing, have properly advertised it in suitable quarters, and obtained a consensus of opinion as to its proposed methods and *personnel*, also that it covered somewhat too wide ground as to the proper objects on which its adjudication should be exercised.

The following communications were presented, among others:

From the New York Board of Trade and Transportation, covering a resolution passed by the said Board, endorsing the Pavey Bill, to regulate the height of buildings in New York City. The letter expressed a hope that the Chapter would take similar action.

An ordinance to regulate the height and mode of construction of buildings in the City of Cincinnati, and a letter from Mr. Dielman, Secretary of the Fine-Arts Federation of New York, covering a resolution of that body approving of the bill to regulate the height of buildings in New York City.

A letter from the same, covering a resolution against the appointment of a State Architect. The Secretary said that he had not been officially apprised of any recent movement towards the appointment of a State Architect, though it had been necessary, several years ago, for the Chapter to enter its protest against such action. It had also, at its very last meeting, put itself on record against the possible appointment of a City Architect for New York City. It was then

*Resolved*, That the New York Chapter, A. I. A., sustains its former position in protesting against the appointment of a State Architect, and declares the desirability, in the interests of Art, of entrusting such important work to a special architect.

Another letter from the Secretary of the Federation covered a preamble and resolutions, to the effect that the component societies of the Federation be requested at future elections of their representatives in the Federation to arrange so that each representative serve at least three years, but with one new representative each year.

The Secretary produced a pamphlet by Howard Constable, Practising Member of the Chapter, on "The Fireproofing of Buildings, and the Improvements in Architectural Methods."

A. J. BLOOR, *Secretary*.

## T-SQUARE CLUB, PHILADELPHIA.

THE March meeting was held on the 18th in the Club-rooms and, owing to proposed change in Constitution, was well attended. The subject of competition was "A Design for the Case of a Grand Piano and Bench, to be in Louis XV Style." There were but three designs submitted, but this is probably accounted for by the fact of a general unfamiliarity with style. A. B. Lacey's design, which won "first," was criticised for several mechanical defects, but was thought to have both the form and feeling of the style. W. F. Supplee's design, which won "second," was well conceived and drawn, but criticised for its application of the ornament instead of the ornament controlling the form. Lloyd Titus's design, which received "third," gave a perspective view, in which the colorings were extremely well done, but owing to its not conforming very well with the requirements of the style, was much criticised.

Mr. Burrell, Chairman of the Entertainment Committee, made his report of the Smoker, on March 9th, held in the Bohemian Room of the Art-Club—which we all remember as a very pleasant evening. The Club entertained as guests:

The Hamilton Banjo Club. Mr. Charles Hickman, violinist. Mr. J. B. Colesbury, Mr. Oellers, Mr. Helmbold, Mr. Lincoln Eyre, Mr. Colin Campbell Cooper, Mr. Joseph DeCamp, Mr. Hugh Breckenridge, Mr. Radfield, etc.

The change in the Constitution, of which notice had been given at previous meeting, making the election of officers of the Club on the last meeting in April instead of the first meeting in October, was passed. This was done in order to allow the new officers time in which to prepare their Syllabus for the forthcoming year before their inauguration at the first meeting in October.

Mr. Kelsey spoke of the Architectural Exhibition which the T-Square Club expects to hold in connection with the Sixty-sixth Annual Exhibition at the Academy of the Fine Arts during the coming fall. It is intended that a section shall be devoted to drawings of executed work. Another subject of discussion was the fact that in many of the daily papers items of architectural interest are frequently seen under the head of "Art Notes" or "Real Estate News," and thinking that architecture was worthy of a heading of its own, it was decided, by a motion, that a letter should be written to the editors of several of the papers, asking their coöperation in this matter and suggesting that periodically a space be allotted, headed "Architectural Notes," under which all news relating to architectural development be inserted.

It was suggested that a Memorial Exhibition of the drawings of John Stewardson be held in connection with the next Architectural Exhibition, and the Executive Committee was instructed to make all arrangements for the same, if possible.

An entire revision of the Constitution was a question which was brought up and fully discussed, but decided that at present it was better not to do so.

Meeting adjourned at 10.30.

ADIN B. LACEY, *Secretary*.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

THE BILLIARD-ROOM: ARMY AND NAVY CLUB-HOUSE, WASHINGTON, D. C. MESSRS. HARVEY L. PAGE & CO., ARCHITECTS, WASHINGTON, D. C.

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PLANS AND PERSPECTIVE OF THE SAME BUILDING.

TEN COMPETITIVE DESIGNS FOR A MEMORIAL OF A BELOVED DAUGHTER, SUBMITTED BY "Austin," "Sherwood," "Ionian," "Funèbre," "Pax," "Her Brother," "Amans," "Onis," "Sir C. Wren" and "Pericles."

THE simple programme under which these designs have been submitted is this:

"A gentleman who desires to mark the final resting-place of a cherished daughter wishes to be enabled to place in the hands of a skilled artisan a single sheet of paper, bearing within the limits of 21" x 33", all the indications needful to bring about the erection of the memorial he has in mind, at a cost not exceeding, as he hopes, \$500."

The members of established architectural associations, to whom alone these competitions are open, whether or no they have actually taken part in this competition, will now vote for the three best designs here published, recording their votes with the officers of their own association. When these officials shall have closed the polls and forwarded the returns to us, the result can be ascertained and declared.

It may be interesting to know that in the case of some of the associations, none of the designs actually prepared succeeded in passing the scrutiny of their own fellow-members and, consequently, no designs from such associations have been forwarded to us for publication.

[The following named illustrations may be found by reference to our advertising pages.]

THE SALLE LEYS, HÔTEL DE VILLE, ANTWERP, BELGIUM. RESTORED IN THE LAST HALF OF THE XIX CENTURY, BY CORNELIS DE VRIENDT, ARCHITECT.

MILL ON THE SARTHE, DRAWN, AFTER A PHOTOGRAPH, BY REUBEN W. FOGEL.

SKETCH FOR AN EIGHT-ROOM SCHOOL-HOUSE, BY MR. REUBEN W. FOGEL.

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[Gelatin Print.]

MANTELPieces IN THE SAME CLUB-HOUSE.

[Gelatin Print.]

READING-ROOM IN THE SAME CLUB-HOUSE.

[Gelatin Print.]



BALTIMORE, MD.—The Walters Art Gallery will be open to the public on all Wednesdays and Saturdays in April, and on Easter Monday.

BOSTON, MASS.—*Paintings recently purchased; the Martin Brimmer Pictures; Japanese Paintings; Etchings by Seymour Haden:* at the Museum of Fine Arts.

*Paintings by New England Artists:* at the Jordan Art Gallery, 450 Washington St., until June 1.

*Works by Swedish Artists:* at the Boston Art Club, until March 28.

*Ninth Exhibition of Boston Society of Water-color Painters:* at Williams and Everett's Gallery, 190 Boylston St., March 23 to April 4.

BUFFALO, N. Y.—*Fifth Annual Exhibition of the Buffalo Society of Artists:* March 23 to April 11.

CHICAGO, ILL.—*Annual Exhibition of the Cosmopolitan Club:* March 11 to 31, at the Art Institute.

*Ninth Annual Exhibition of the Chicago Architectural Club:* at the Art Institute, March 27 to April 8.

NEW YORK, N. Y.—*Twenty-ninth Semi-annual Exhibition, including Loan Exhibition of Early American Paintings, Old English Paintings, and the Cullum Collection of Classic Sculptures:* at the Metropolitan Museum of Art.

*Exhibition Illustrative of a Century of Artistic Lithography:* at the Grolier Club, until March 28.

*Seventy-first Annual Exhibition of the National Academy of Design:* March 30 to May 16.

*Eighteenth Annual Exhibition of the Society of American Artists:* at the Fine-Arts Building, 215 West 57th St., opened March 27.

*Portraits by Theobald Chartran:* at Knoedler's Gallery, 355 Fifth Ave.

PHILADELPHIA, PA.—*Sixth Annual Exhibition of Water-colors and Pastels:* at the Art Club, March 23 to April 19.

*Pictures of the Glasgow School, and Burnt-wood Work by J. William Fossick:* at the Pennsylvania Academy of Fine-Arts.

PROVIDENCE, R. I.—*Second Annual Exhibition of the Society of Painters in Water-color of Holland:* at Jackson Galleries, 301 Westminster St., opened March 18.

WASHINGTON, D. C.—The Art Gallery of Thomas E. Waggaman will be open to the public on Thursdays during April.



THE PRESERVATION OF MEDIAEVAL CAIRO.—It is more than twelve years since the *Times* drew attention (July 30, 1883) to the excellent manner in which the then newly-founded "Commission for the Preservation of the Monuments of Arab Art" had set about its important duties. The annual reports published by the Comité, and the testimony of numerous artists and travellers, have informed the public from time to time that the work has not stood still, that the Commission has not relaxed its efforts to preserve the mosques and private buildings of mediæval Cairo, and that, on the whole, its energy has been tempered with discretion. A recent detailed inspection of its more important labors has strongly confirmed this favorable impression. There can be no doubt that the Commission fully realizes its responsibility as guardian of the monuments, and has succeeded in doing a great deal of very valuable work in spite of much difficulty and opposition—work which has never yet been adequately recognized or supported, but for which artists and archæologists, to say nothing of mere lovers of the beautiful, should be grateful for many generations to

come. But for the watchful care of the Commission, many of the most interesting monuments of Cairo would by now have fallen, either by natural decay, aided by neglect, or by the rude hand of the modern street-improver, who within memory has cut a mosque in two or demolished a mediæval palace for no better reason than the correct alignment of a hideous new boulevard. These things cannot be done now; they became impossible the moment the Commission began to exercise its legal power to prohibit the smallest interference with an historical monument. That veto has been firmly used during the past twelve years, and the negative work of restraining the destroyer and warding off the predatory collector has been supplemented by the positive work of repairing decay and counteracting the effects of time and weather. The result of much patient labor and vigilance may be briefly stated. The Arab monuments of Cairo are now in a far better condition than they were a dozen years ago; decay, which once seemed as inevitable as fate itself, has been arrested; as far as can be determined, no monument of importance has been allowed to grow more ruinous, but, on the other hand, many mosques have been put into a thoroughly safe condition, and a few have been or are being completely restored. Comparing the state of the mosques in 1883 and now, there is very little to regret, but much to be thankful for; and the body to which we are indebted for the present state of preservation of mediæval Cairo is solely the "Comité de Conservation des Monuments de l'Arte Arabe."—*London Times's Correspondence.*

THE BERLIN EXHIBITION.—The Berlin Exhibition is to be opened in a couple of months' time, and, strange to relate, there seems every likelihood of its really being ready in time. There is much credit due in this respect, and even the cold and wintry weather which has been experienced in Prussia does not appear to have materially interfered with the arrangements. A staff of over 2,000 workmen has been engaged for months, and everything is being pushed ahead with much energy. The large hall is entirely of iron and glass, and it covers an area as large as the whole of the Berlin Exhibition of 1879. It will be lighted by 508 arc and some 250 incandescent lamps. Although the lines are not altogether pleasing, its white color forms a striking contrast to the surroundings. Exception has been taken to the absence of loftiness in the large dome, which is covered with aluminium, and the height of which (about 140 feet) is too low as compared with its diameter of 105 feet, a fact which is only being enhanced by the two turrets, which are 200 feet in height. The Treptow Park is, however, exceptionally well adapted for its present purpose, and even if the impression of the main building falls somewhat short of what one might have expected, the grounds will contain innumerable interesting and stylish buildings and other attractions. The "Old Berlin" will, no doubt, rival similar arrangements at other exhibitions, with its 120 buildings and 70 shops, where the trade of 250 years ago will be revived as near as possible, and where, also, various interesting retrospective exhibitions will be arranged. Although the buildings are only intended to be used for some six months, they are, comparatively at least, well built. The lake has been extended to more than twice its usual length, and on the other side, opposite the main building, lies the large restaurant in the Italian style. Amongst some of the most interesting buildings must be mentioned that of the City of Berlin, the Fisheries Exhibition, the Colonial section, the Chemical Industries section, etc. Great preparations are being made in order to cope with the increase in the traffic. Apart from the new lines started for that purpose, those already in existence are increasing the rolling-stock, staff, etc. The Ringbahn is having a large number of young ladies trained as booking-clerks, so that the experienced hands can take over more responsible work. It is here a question of several hundred additional clerks.—*Engineering.*

A CROWN PRINCESS "IN THE ALTOGETHER."—Crown Princess Stephanie, of Austria, is just at the present moment the subject of much gossip in connection with a somewhat peculiar incident that has taken place at Abbazia, on the Austrian Riviera, where she is accustomed to spend every winter. Some time ago the idea of erecting a monument to Crown Prince Rudolph was started, the Archduke having been the principal benefactor and even the creator of the place. The monument has been set up in the wonderful gardens that surround the fine hotels and reach down to the waters of the Adriatic, and ten days ago the Crown Princess, having been invited to unveil it, went a few hours previous to the time of the ceremony to view it. The monument is in the form of a nymph, and is the work of a Viennese sculptor who had already adorned the front of the Hotel Stephanie with a statue of the Virgin, as Star of the Sea, bearing a striking resemblance to the Crown Princess. As this compliment had been well received, the sculptor thought that he could not do better than make the Nymph of Abbazia resemble the Princess again. But the result was calamitous; for the resemblance was so striking that, as soon as the Archduchess set her eyes upon the statue, she indignantly declared that she would not unveil so scantily-clad a figure, no matter how handsome it might be as a work of art. The statue, in fact, is completely unclad and somewhat voluptuous in its lines and curves. The ceremony was put off, and so fearful have the authorities of Abbazia been of offending their principal patroness—the person to whom, above all others, the place is indebted for the continuance of its vogue—that they have had the monument removed and consigned to oblivion, being nevertheless compelled to pay the sculptor the full price agreed upon.—*Marquise de Fontenoy in the Philadelphia Press.*

THE PALAIS DE L'INDUSTRIE.—A noteworthy opposition to the demolition of the Paris Palais de l'Industrie in the Champs Elysees is being made. The *palais* does not date back to the Exposition of 1856, as is generally supposed, but to 1852, when it was designed for the purpose of public ceremonies and civil and military functions. It is thought that no pleas can save the famous landmark.—*Exchange.*













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